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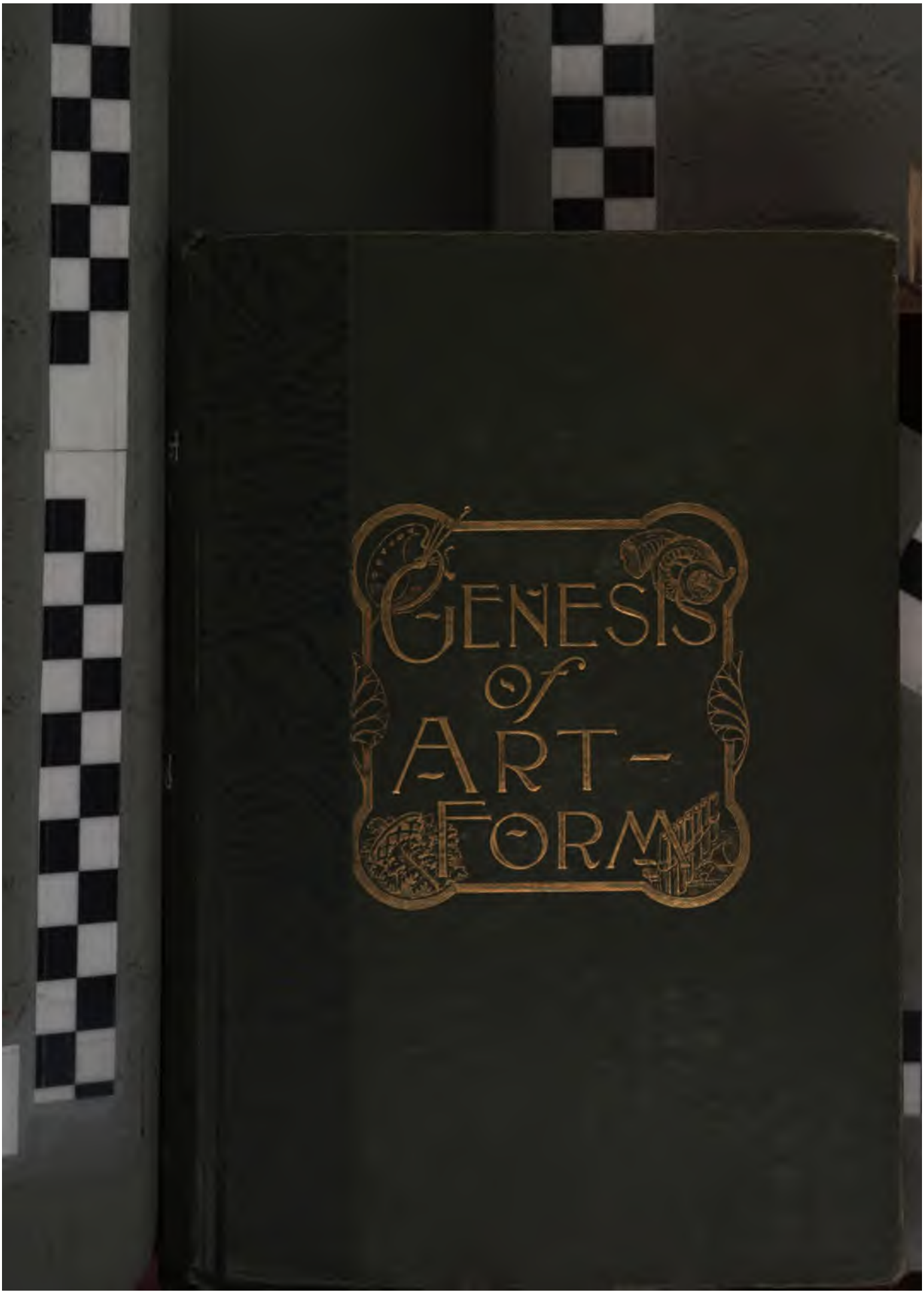
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THE
GENESIS OF ART-FORM

AN ESSAY IN

COMPARATIVE ÆSTHETICS

SHOWING THE IDENTITY OF

THE SOURCES, METHODS, AND EFFECTS OF COMPOSITION
IN MUSIC, POETRY, PAINTING, SCULPTURE
AND ARCHITECTURE

BY

GEORGE LANSING RAYMOND, L.H.D.

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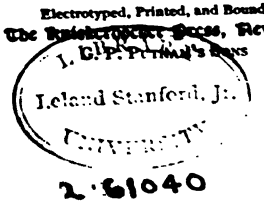

PREFACE.

THIS book is the result of an endeavor to trace to their sources in mind or matter the methods employed in the composition of the art-forms. As an incidental, yet, as it seemed, necessary step to the accomplishment of this endeavor, the action of the mind in these methods has been identified with its action in scientific classification; the methods have been arranged according to the logical order of their development; they have had added to them, so as to render the whole presentation complete, a number hitherto recognized, if at all, only indirectly; and their character and effects have been shown to be exemplified not alone in painting, sculpture, or architecture, to which it has been customary to confine consideration in essays of this kind, but equally in all the arts.

The theoretical, too, has been so connected throughout with the practical—each principle unfolded has been so amply illustrated—that it is hoped that the work will meet the requirements of that large number of readers who, while interested in the one or the other of these phases of the subject, are not interested in both. Such a partial interest with reference to that which it is important to understand in full, all must recognize to be unfortunate; so much so that any attempts, as in these pages, tending, however slightly, to remedy it ought to be welcomed. It is equally unfortunate too for critic and producer. In

every age, of course, men of genius are prompted instinctively, entirely aside from any knowledge that they may have of æsthetic laws, to recognize and embody æsthetic effects. But where are such men who fail to find themselves surrounded by the products of their inferiors? and who is able wholly to resist the influence of these? If it be true that art, like religion, is fountained in inspiration, it is true also that different sources of this differ in quality; and that the stream which flows from the high region of the masters has a purity not characterizing that which rises in the low plane of their imitators. Poetry, painting, sculpture, and architecture were none of them of the same rank in the first century before Christ as in the fourth, or in the eighteenth after Him as in the sixteenth.

Nor is the taste of any age, however it may stimulate ability or aspiration to produce, above the sway of fashions, good and bad, that, in proportion as they keep truth fettered, render excellence impossible. In order to attain this, the leader in art, as in religion, must break away from them, in fact from all the shackles of conventional traditionalism—one might almost say of historic criticism, broadly beneficial as this has been in many a direction, —and, searching back of them, must find within himself and in the world about him, those first principles that underlie the nature of both thought and things.

Such are the conceptions in which this book has had its origin; and in the degree in which the conclusions reached in it are accurate, and appeal as such to the reader's judgment, it will make evident that the effects for which the artist seeks are due to laws that operate far more inflexibly than sometimes is supposed; it will suggest that originality, while wider in its scope than those imagine who confound the methods of the master-artists

with their manner, has too its limits; and it will reveal beyond a doubt why many works of so-called art produced to-day, because devoid of almost every element of art, can never be of permanent interest, as well as why, for reasons just the opposite, so many of those that are now the classics of the past have charms that never can be lost.

PRINCETON, N. J., November, 1892.

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THE GENESIS OF ART-FORM.

CHAPTER I.

CLASSIFICATION AS THE BASIS OF METHOD IN SCIENCE AND ART.

Spirit, Matter, and their Combination as Sources of Phenomena in Religion, Science, and Art—Limitations of the Present Book—Why Thought must be Expressed in Terms of Matter—How Inaudible and Invisible Mental Conceptions Come to be Represented in Language, Intonation, Writing, Carving, and Building—These Pass into "The Arts" when they Begin to be Developed for the Sake of the Form—The Arts Represent Thought and Feeling through Elaborating Natural Forms Appealing to the Ear and Eye—Illustrations—The Artist Uses for this Purpose the same Forms that all Men Do—Who, before they can Understand and Use them Effectively must, through Comparison, "Classify and Conquer" them—This the Basis of Knowledge in all Departments—Science and Philosophy Classify Effects Conditioned upon Laws Operating underneath Natural and Mental Phenomena: Art Classifies Effects Conditioned upon Laws Operating underneath Æsthetic Appearances or Forms—An Embodied Finite Mind Requires Body and Definiteness to Appeal to its Intelligence—The Artist Groups Phenomena Mentally to Gain a General Conception, then, in a Way Analogous to Classification, Groups them Materially to Impart it—Connection between these Processes, and Representing in Art both the Human Mind and Nature—How the Artist, by Classifying the Forms of Nature, Represents his own Mind—And how the Forms of Nature.

ALL the phenomena of life are traceable to two sources—spirit and matter. The respective results of the two, however, are not clearly distinguishable, so that,

practically, we must always consider, as a third source, a combination of both. Subjects of thought of any importance involve relations to all of the three; but the chief place is assigned to the first source in religion, to the second in science, and to the third in art, the phenomena of which, corresponding to those of life in general, are all traceable to man as the possessor of *mind*, which is the embodiment of spirit; to *nature*, which is the embodiment of matter; and to a combination of the effects of mind and nature in a *product*. Of these, however, it is the latter which, in every case, determines the peculiar character of art as art.

For this reason writers upon the subject usually start with a consideration of the *product*. Inasmuch, too, as, according to the conditions, this is a combination of effects coming from both man and nature, they are obliged, to some extent, to consider in what ways it has been influenced by both. But the emphasis given to either the one or the other source may cause a wide deviation in the lines of discussion. In the one case the relations of art to the representation of the *thoughts* and *feelings* experienced by the man engage the attention; in the other its relations to the appearances and arrangements observed in *nature*. It is with the latter of these topics, but with it always as necessarily connected somewhat with the former, that this book has to deal. Nor will the whole even of this topic be treated. What is to be discussed is believed to be fundamental in character and comprehensive in results; but nothing more will be undertaken than to show how, the conditions of mind and matter being what they are, those complex products which we ascribe to art have come to be in their material conditions what they are. By a psychologic process, in a case where the

prevailing and popular historic method will not suffice, an endeavor will be made to trace the sources of the laws of composition, to indicate how they are developed, what they are, why they operate as they do, and how, in all the arts, they operate in the same way.

Let us begin by recalling why it is necessary for the purposes of art, or for any human purposes, that the things that have their source in mind should be connected or combined with the things that have their source in matter. The reason is obvious. Man is a social being, and likes to communicate the results of his mental processes. But others can learn of these only through their material organs of sight and hearing, and his thoughts and feelings in themselves are invisible and inaudible. He must, therefore, connect them in some way with things that are not so, with things that are sufficiently material to produce the desired material effects. These things he can find only in what is termed external nature.

The process that he pursues is like this. He hears sounds coming from waters, forests, beasts, birds, and, instinctively, from himself and other men; and, being endowed with powers of imitation and reflection, he begins, in concurrence with his fellows, to use certain of these sounds for words, embodying conceptions which each sound, in its own way, has suggested to him. Later on he observes certain relations existing between objects signified by the words, and, according to some principle of association or comparison, he compounds them, forming terms like *ex-press*, *up-right-ness*, *under-standing*, and he learns, at the same time, to connect these and all his words grammatically. Finally, through such processes, continued through many years, he comes to be able to convey his conceptions fully in intonations and language.

Again, he sees forms in nature, and by themselves, or in connection with other forms, they, too, necessarily suggest conceptions to him; and he recognizes soon that these visible forms also, in fulfilment of the same principles of association or comparison, can be made, by being imitated in whole or in part, to represent to his neighbor the conceptions that they have already suggested to himself; and beginning by rude sketches and constructions, leading, by-and-by, to the inventing of ideographic and hieroglyphic writing, and of ornamental designing, he finally comes to use, in order to convey his conceptions, the various methods now in vogue of drawing, carving, and building.

It takes many centuries for such methods to develop into arts like music, poetry, painting, sculpture, and architecture. But, after a while, these all appear. It is important to notice, too, that the way in which they differ from ordinary and merely natural modes of expression is in the fact that they are not used, or, if so used at first, have ceased to be used for expression's sake alone. A man hums and talks, fulfilling an instinctive prompting of his nature, in order to give vent to certain inward moods. It is when something about the form in which he hums[1]—the movement, the tune—attracts his attention, and he begins to experiment or play with it for its

[1] Compare with this what is said by Herbert Spencer in his "Principles of Psychology," ii., chapter ix.: "Play is . . . an artificial exercise of powers which, in default of their natural exercise, become so ready to discharge that they relieve themselves by simulated actions in place of real actions. For dogs and other predatory creatures show us unmistakably that their play consists of mimic chase and mimic fighting. It is the same with human beings. The plays of children—nursing dolls, giving tea parties, and so on, are dramatizings of adult activities. The sports of boys, chasing one another, wrestling, making prisoners, obviously gratify in a partial way the

own sake, that he begins to develop the possibilities of the musician. In the same way, it is when something about the forms in which a man talks—the metaphors, similes, sounds of the words—attracts his attention and he begins to experiment with them, that he begins to develop the possibilities of the poet. So with drawing, carving, and building. A man does more or less of all of these, owing to an instinctive prompting within him; but when something about the outlines, colors, and materials that represent the conditions or relationships of nature attracts his attention, so that he begins to experiment with them —it is then that he begins to develop the possibilities of the painter, the sculptor, or the architect.

While, therefore, the art-product is traceable to an expression of mental thoughts or feelings, the elements of which it is constructed are forms borrowed from nature, and the method of construction, or composition, as it is ordinarily called, is a process of elaboration.[1] It is this process which, in the present book, we are to consider; in other words, the methods in the different arts, of elaborating natural forms of expression so as to make them, in a broad sense of the term, artistic.

The natural forms of expression which are thus elaborated include all things that can be heard or seen; for there are none of these which, at certain times, the mind cannot use for the purpose of representing outwardly its

predatory instincts. . . The higher but less essential powers, as well as the lower but more essential powers, thus come to have activities that are carried on for the sake of the immediate gratifications derived, without reference to ulterior benefits; and to such higher powers, æsthetic products yield those substantial activities, as games yield them to various lower powers."

[1] See the author's "Poetry as a Representative Art," chapters i., ii., xv., xvi.

inward processes. Because it can seldom, if ever, use for the same purpose agencies that appeal to the lower and more physical senses of touch, taste, and smell; from them no arts of the highest class are ever developed. With what we have, however—the sounds and sights of nature,—the range from which the elements of expression can be selected is practically infinite. What a chaos do they suggest in their natural condition, and what a mastery of chaos in the condition in which art, when it has done its work, leaves them! In the realm of sound, nature furnishes effects like the rustling of trees, the rushing of waters, the chirping of birds, the growling of beasts, and the whistling, humming, crying, groaning, scolding, laughing, and talking of human beings. From these, in some way, after centuries of experiments, art produces a Beethoven's "Seventh Symphony" and a Shakespeare's "Hamlet." In the realm of sight, nature furnishes shapes like those of clouds, mountains, valleys, streams, trees, flowers, animals, and men. And from these, by and by, in some way, art produces a "Madonna" of Raphael, a "Moses" of Angelo, a "Cathedral of Cologne."

By what method does art accomplish these results? This is the question before us. In answer, it is important to notice, first, that the appearances of nature with which the artist has to do are the same as those with which every man has to do. They confront the child the moment that his ears and eyes are opened to apprehend the world about him. As soon as he begins to observe and think and act, these furnish him with his materials—with facts to know, with subjects to understand, with implements to use.

It is important to notice again that men generally—and possibly we may find the same true of artists—before they

can master the materials about them, must do what is expressed in the old saying, "Classify and conquer." When the child first observes the world, everything is a maze; but, anon, out of this maze, objects emerge which he contrasts with other objects and distinguishes from them. After a little, he sees that two or three of these objects, thus distinguished, are alike; and pursuing a process of comparison he is able, by himself or with the help of others, to unite and to classify them, and to give to each class a name.

As soon as, in this way, he has learned to separate certain animals,—horses, say, from sheep,—and to unite and classify and name them, he begins to know something of zoölogy; and all his future knowledge of that branch will be acquired by further employment of the same method. So all his knowledge, and not only this, but his understanding and application of the laws of botany, mineralogy, psychology, or theology will depend on the degree in which he learns to separate from others, and thus to unite and classify and name certain plants, rocks, mental activities, or religious dogmas. Without classification to begin with, there can be no knowledge, no understanding, no efficient use of the materials which nature furnishes. The physicist is able to recognize, relate, and reproduce effects only in the degree in which he is able to classify the appearances and laws, the facts and forces of material nature. The metaphysician is able to know, and prove, and guide to right action only in the degree in which he is able to classify feelings, conceptions, and volitions with their motives and tendencies as they arise in mental consciousness and manifest themselves in action.

Why should not the same principle apply in the arts? It undoubtedly does. Just as the physicist classifies effects conditioned upon laws operating underneath phe-

nomena of a physical nature, and the psychologist classifies effects conditioned upon laws operating underneath phenomena of a psychical nature, so the artist classifies effects conditioned upon laws operating underneath phenomena of an artistic nature. This fact necessitates his considering appearances both as produced in the world without him, and as influencing the mind within him. But not even the double nature of these effects removes the artist from the essential conditions of the comparison just made. As most men use language, they mean by the term scientist not a mere physicist, but one who is also something of a psychologist; and by a philosopher not a mere psychologist, but one who is also something of a physicist. The artist does not differ from others who form classifications, in being influenced from the direction both of mind and matter but, mainly, in the aim which he has in view. The factors classified and the results attained in science, philosophy and art are different; but in essential regards, the method is the same. It is so because it is the same human mind that applies it.

This mind is an embodied mind, belonging to a realm not infinite, but finite; and things that appear to be infinite in number or variety are beyond its grasp. A man must analyze, and group, and marshal into order, and define—in other words, "classify and conquer" the elements of the chaos about him, before they can afford him any satisfaction, before they can appeal with any force to his intelligence, or be used by him so as to appeal to the intelligence of others.

It is true that what has been called classification does not in art result merely in mental conceptions of classes, as of *horses* or *oaks* in science, or as of *materialists* or *idealists* in philosophy. The first result is a mental con-

ception; but afterwards, through a further application of precisely the same method, there comes to be an objective external product. In other words, the artist begins by gaining a general conception of a class in the same way as the scientist and philosopher; but he ends by producing a special specimen of a class. Even the latter, however, results, as we shall find, from his grouping together for this purpose, according to the methods of classification, like or allied factors.

Before going on to confirm this statement, it seems important to point out that the principle involved in it is not inconsistent with the statement made at the opening of this chapter, namely, that the product of art is due not only to the requirements of the mind, but also to the conditions that are furnished by nature. To render it clear that what was said there, is in harmony with what has just been said here, it is necessary to show, first, that obtaining a general conception as a result of classification, and embodying this in art, is not inconsistent with the artist's representing himself or *his own mind;* and, second, that constructing a product as a result of a further application of the methods of classification, is not inconsistent with his representing the *forms of nature.*

To show the first of these one need only direct attention to the intimate connection that always exists between giving expression to general conceptions, and representing the whole range of the results of observation and thought that together constitute mental character. Imagine a gardener classifying his roses—as he must do instinctively the moment that he has to deal with any large number of them—and obtaining thus a general conception of the flower. Then imagine him trying in some artificial way to produce a single rose embodying this

conception. This rose will very likely resemble some one rose particularly present to his mind while forming it; yet, probably, because, before starting with his work, he has obtained a conception of roses in general, his product will manifest some rose-like qualities not possessed by the specimen before him, but suggested by others. That is to say, because of his general conception derived from classifying, he does more than imitate—he represents in that which is a copy of one rose ideas derived from many roses. The same principle applies to all works of art. Let a man write a story or paint a picture. In nine cases out of ten in the exact degree in which he has observed and classified many like events or scenes, he will add to his product the results of his own thinking or generalizing. In fact, it is a question whether the chief charm of such works is not imparted by the introduction into them, in legitimate ways, of these kinds of generalizations having their sources not in the particular things described, but in the brains of the describers, who have already been made familiar with many other things somewhat similar. Shakespeare certainly did not get the most attractive features of his historical plays from history, nor Turner those of his pictures from nature. So, as a rule, even in the most imitative of works, the really great artist, consciously or unconsciously, gives form to conceptions that he has derived from an acquaintance with many other objects of the same class as those imitated. There is no need of saying more to show what is meant by affirming that *the mind of the artist* that would represent itself in art must start by classifying in order to conquer the forms of nature with which it has to deal.

Now, for the second fact, needing to be shown, namely,

that a product can be constructed as a result of an application of the methods of classification, and yet represent *the forms of nature.* At first thought, classification, and anything resembling imitation appear to necessitate different processes. But, possibly, they do not. Suppose that the forms of nature themselves were found to manifest effects like those of classification? In that case, to imitate them would involve imitating this; and to add to them, as is usually done in art, and to add to them in such a way as to make the added features seem analogous to the imitated ones, and thus to cause the forms as wholes to continue to seem natural, would involve continuing the process of classification. Now, if, with this thought in mind, we recall the appearances of nature, we shall recognize that the condition, which has been supposed to exist there, really does exist. A man, when classifying rocks, puts together mentally those that are alike. So does nature, grouping them in the same mountain ranges, or at the bottoms of the same streams. He puts together leaves, and feathers, and hairs that are alike. So does nature, making them grow on the same trees, or birds, or animals. He puts together human beings that are alike. So does nature, giving birth to them in the same families, races, climates, countries. In fact, a man's mind is a part of nature; and when it works naturally, it works as nature does. He combines elements as a result of classification, in accordance with methods analogous to those in which nature, or, "the mind in nature," combines them. Indeed, he would never have thought of classification at all, unless in nature itself he had first perceived the beginning of it. He would never have conceived of forming a group of animals and calling them horses, nor have been able to conceive of this unless nature had first made horses

alike. To put together the factors of an art-product, therefore, in accordance with the methods of classification, does not involve any process inconsistent with representing accurately the forms that appear in the world. These forms themselves are made up of factors apparently put together in the same way, though not to the same extent.

CHAPTER II.

UNITY AND COMPARISON, VARIETY AND CONTRAST, COMPLEXITY AND COMPLEMENT IN CLASSIFICATION AND COMPOSITION.

Introduction—Mental and Material Considerations Connected with each of the Methods—Yet Divisible in a General Way into those Manifesting Effects of Mind, of Nature, and of both Combined—How Mental Considerations Lead to Unity—This Attained by Putting the Like with the Like by Way of Comparison—Exemplified in the Art-Forms: in Poetry—In Music—In Paintings—In Statues—In Buildings of all Styles—In Natural Forms—This Method Necessary to Imaginative or any Æsthetic Expression—How the Consideration of Natural Forms Leads to Variety—This Involves Putting the Like with the Unlike by Way of Contrast; its Effects Illustrated in Classification—Variety in Poetry—In Music—In Painting, Sculpture, and Architecture—Direct Antithesis as Related to Comparison—Its Effect in Literature—In Poetry—In Music—In Outline—In Color—How Considerations of Mind and Nature, or Unity and Variety, Lead to Complexity—How Comparison and Contrast Lead to Complement.

WE are now prepared to consider in a general way, which only is necessary for our purpose, certain facts with reference to the methods pursued by men when forming the groups brought together in classification. For the reasons given in the last chapter, we may expect, as a result, to obtain important suggestions with reference to the right methods of bringing together factors in art-forms.

Let us start here, recognizing again the intimate connection always existing in art between expression and

form, by stating anew the fact already brought out in the last chapter, namely, that the artist in his work is influenced by both *mental* and *material* considerations. He begins with a conception which in his mind is associated with certain forms or series of forms, and to these he adds others, expressive of a similar conception. These latter, it is evident, are attributable, some of them to the character of the conception that he wishes to express, and some of them to the character of the natural forms through which he must express it; some of them, in other words, to mental, and some of them to material considerations. But while this is true in such a sense as to justify a general division of his methods upon the ground that they are traceable in part to the character of mind and in part to that of nature, there is also a sense in which every one of them is traceable to both. For this reason a discussion of any method whatever must include, to be complete, some reference both to its mental and to its material bearings.

With this explanation, which will show that it is not intended to make too exclusive a statement in any case, we may divide the methods of classification and also of art-composition into those that manifest chiefly the effects of *mind*, of *nature*, and of the combined influences of *both*.

So far as classification results from the conditions of *mind*, its function is to simplify the work of forming concepts, and its end is attained in the degree in which it enables one to conceive of many different things—birds or beasts, larks or geese, dogs or sheep, as the case may be—as one. Classification is, therefore, an effort in the direction of *unity*. It is hardly necessary to add that the same is true of art-composition. Its object is to unite many different features in a single form, an effect invariably pro-

duced, too, by all except the most elementary products of nature.

Unity being the aim of classification, it is evident that the most natural way of attaining this aim, is that which was mentioned in the first chapter, namely, *putting like with like;* and that doing this necessitates a process of *comparison.* It is because all fish are seen in some way to com-

FIG. 1.—RESTORATION OF THE WEST END OF THE ACROPOLIS.
See pages 16, 75, 89, 123, 207, 261.

pare, that the mind classes them in one group, and is enabled ever after to conceive of this group as a unity.

Turning now to the æsthetic arts, and considering how what we term form in them has been developed, we shall have no difficulty in recognizing it to be the result of an application of a similar method. To show this, were we to follow the order most naturally suggested by that of their historic and psychologic development, we should begin with music; but as poetry is more susceptible of

exemplification in book form, it will be better for our purposes in the present discussion to begin all our illustrations with it. Looking first at poetry, then, we find the chief characteristic of its form to be lines of like lengths, divided into like numbers of feet, each uttered in like time, to which are sometimes added alliteration, assonance, and rhyme, produced by the recurrence of like sounds in either consonants, vowels, or both.

So with music. The chief characteristic of its form is a series of phrases of like lengths, divided into like numbers of measures, all sounded in like time, through the use of notes that move upward or downward in the scale at like intervals, with like recurrences of melody and harmony.

In painting, sculpture, and architecture, no matter of what "style," the same is true. The most superficial inspection of any product of these arts, if it be of established reputation, will convince one that it is composed in the main by putting together forms that are alike in such things as color, shape, size, posture, and proportion. In confirmation of this, observe, of paintings, Rubens' "Descent from the Cross," Fig. 16, page 73; Gérôme's "Pollice Verso," Fig. 26, page 81; Tenier's "Village Dance," Fig. 43, page 143; Troyon's "Cattle," Fig. 50, page 173; Turner's "Decline of Carthage," Fig. 51, page 175; and Correggio's "Holy Night," Fig. 70, page 215. Read also pages 255–6.

Of statues, observe a part of the "Group of the Niobe," Fig. 45, page 146; "The Soldier's Return," from the Neiderwald National Monument, Fig. 52, page 176; "The Dancer," Fig. 56, page 183; and the "Romans Besieging a German Fortress," Fig. 6, page 27.

Finally, of buildings, observe, in the Greek style, the "Temples on the Acropolis," Fig. 1, page 15; in the

FIG. 2.—COLOGNE CATHEDRAL—FAÇADE.

See pages 18, 87, 90, 190, 207, 291.

Greco-Roman style, "St. Peter's, Rome," Fig. 23, page 78; in the Gothic style, the "Cathedral of Cologne," Fig. 2, page 17, of "Salisbury," Fig. 68, page 207, and of "Canterbury," Fig. 32, page 89; in the Romanesque or Norman style, the "Cathedral of Sienna," Fig. 97, page 292, and the "Interior of the Church of the Sacred Heart, Paris," Fig. 12, page 49; and, in the Byzantine and Oriental styles, "St. Mark's, Venice," Fig. 31, page 88, the "Mosque of St. Sophia," Fig. 42, page 123, the Chinese Temple, Fig. 69, page 208, and that great memorial structure of India, by many considered the most beautiful building in the world, the "Taj Mahal," Fig. 3, page 19.

Notice now, as was intimated in the last chapter, that art, in pursuing this method, does no more than to carry farther a process that nature itself has already begun. The utterance of every bird or beast is made up of notes sufficiently similar to be termed, in a broad sense, alike. Every tree is covered with like limbs and leaves, every animal with like hair or scales or feathers, and every pair of feet or hands is ended with like claws or toes or fingers.

Notice, again, that the method involves no more than is necessary in order to make the products of art what they are. Every one knows that comparison is the very first result of any exercise of the imagination. And he knows also that imagination is the source of all art-production. When a man begins to find in one feature the image of another, and, because the two are alike, to put them together by way of comparison, then, and then only, does he begin to construct an art-product. And not only so, but only then does he continue his work in a way to make it continue to be a medium of expression. The forms which he elaborates are naturally representative of certain phases of thought or feeling, and the significance

FIG. 3.—TAJ MAHAL, INDIA.

See pages 18, 75, 77, 87, 96, 124, 180, 186, 190, 207, 261.

of the completed product depends upon its continuing to represent these phases. But it can continue to do this only when that which is added in the process of elaboration is essentially like that with which the process starts. It is a striking illustration of the rationality which characterizes the action of the mind when working naturally and instinctively though without knowledge of reasons, that the forms of all the arts, as developed in primitive ages, should fulfil this rational requirement. It is an equally striking illustration of the irrationality and departure from nature into which too much self-conscious ratiocination may plunge the same mind, that, in our own more enlightened age, art-forms should not only be tolerated but praised—in poems and buildings for instance—in which the principle of putting like with like has been utterly disregarded.

Observe the style of the following:

Who learns my lesson complete?
Boss, journeyman, apprentice—churchman and atheist,
The stupid and the wise thinker—parent and offspring, merchant, clerk, porter and customer,
Editor, author, artist and schoolboy—Draw nigh and commence;
It is no lesson—it lets down the bars to a good lesson,
And then to another, and every one to another still.
—*Leaves of Grass: Whitman.*

O I believe there is nothing real but America and freedom!
O to sternly reject all except democracy!
O imperator! O who dare confront you and me!
O to promulgate our own! O to build for that which builds for mankind.
O feuillage! O North! O the slope drained by the Mexican sea!
O all, all inseparable—ages, ages, ages!—*Idem.*

Observe also the utter absence of any attempt to fulfil this first requirement of art, in the buildings represented

FIG. 4.—THE EDISON BUILDING, NEW YORK CITY.

See pages 22, 189, 208.

in Fig. 4, page 21, Fig. 5, page 23; also in Fig. 60, page 191, and Fig. 67, page 205.

But classification is traceable not only to the conditions of *mind* but also of *nature*. It is in the latter that the mind is confronted with that which classification is intended to overcome, with that which is the opposite of unity—namely, *variety*. If there were none of this in nature, all things would appear to be alike, and classification would be unnecessary. As a fact, however, no two things are alike in all regards; and the mind must content itself with putting together those that are alike in some regards.

This is the same as to say that classification involves, secondarily, the principle of *putting the like with the unlike;* and necessitates *contrast* as well as comparison. The objects brought together in the same group, while similar in certain general and salient features, are dissimilar in particular and less prominent ones. From a distance, or upon first observation, all the voices of men and all the trees of a forest may seem like repetitions of each other. Were it not so, we should fail to understand what is meant by the terms "human voice" and "oak-tree." We use these terms as a result of unconscious classification obtained by regarding certain general features that first attract attention. But when we approach near the object or examine it carefully, we find that each voice and tree differs from its neighbors; not only so, but each note of the same voice and each leaf of the same tree.

A similar fact is observable in products of art. They, too, while developed from the tendency to group together forms that are alike, are composed of factors not alike in all regards. Take poetry. Who does not perceive the

FIG. 5.—CENTRAL CONGREGATIONAL CHURCH, PROVIDENCE, R. I.

See pages 22, 189, 208.

additional charm imparted to verses in which more or less unlikeness is blended with that likeness, which, a moment ago, was said to constitute the chief element of their forms? What is it that imparts freedom and naturalness to the sounds of the following lines, except the introduction, here and there, of changes which, nevertheless, do not interfere with the general similarity of effect characterizing the whole?

That orbèd maiden with white fire laden
Whom mortals call the moon,
Glides glimmering o'er my fleece-like floor
By the midnight breezes strewn;
And wherever the beat of her unseen feet,
Which only the angels hear,
May have broken the woof of my tent's thin roof,
The stars peep behind her and peer;
And I laugh to see them whirl and flee,
Like a swarm of golden bees,
While I widen the rent of my wind-built tent,
Till the calm rivers, lakes, and seas,
Like strips of the sky fallen through on high,
Are each paved with the moon and these.

—*The Cloud: Shelley.*

They passed the hall that echoes still,
Pass as lightly as you will.
The brands are flat, the brands are dying,
Amid their own white ashes lying;
But when the lady passed there came
A tongue of light, a flit of flame,
And Cristabel saw the lady's eye,
And nothing else saw she thereby,
Save the boss on the shield of Sir Leoline tall,
Which hung in a murky old niche in the wall.
"O softly tread," said Cristabel,
"My father seldom sleepeth well."

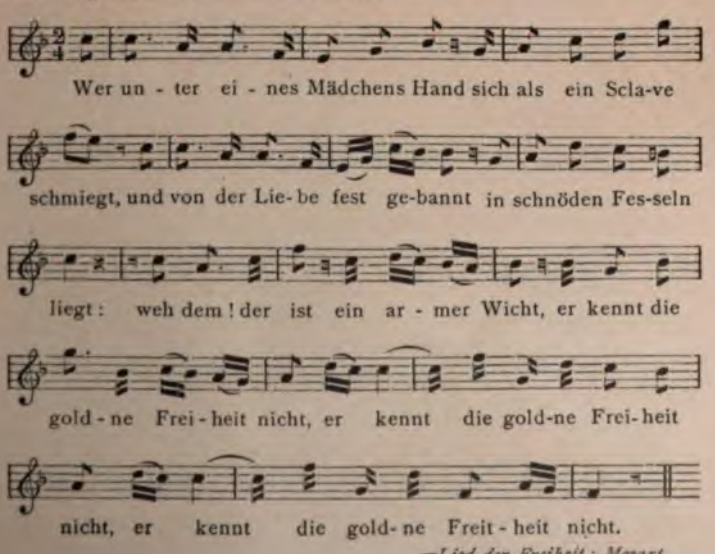
—*Cristabel: Coleridge.*

As contrasted with these, any one can recognize that the following, on account—among other things—of its lack of variety, is less satisfactory.

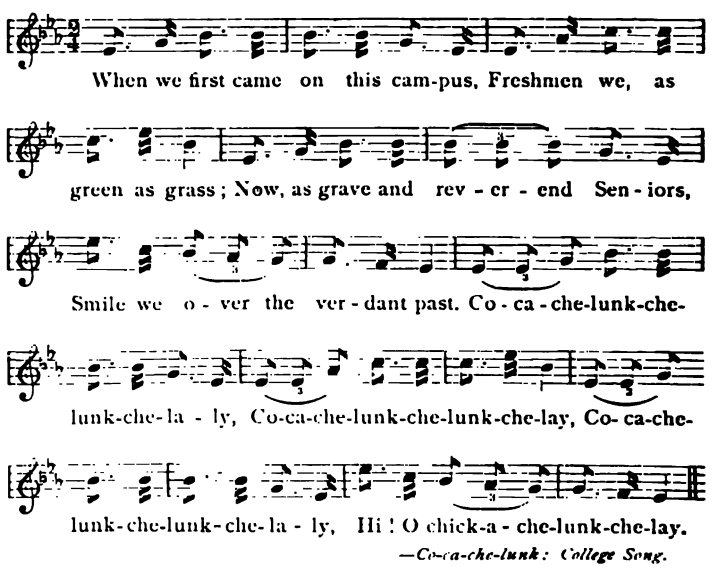
Think, Daphnis, think, what tender things you said ;
Think what confusion all my soul betrayed.
You called my graceful presence Cynthia's air,
And when I sung, the syrens charmed your ear ;
My flame, blown up by flattery, stronger grew,
A gale of love in every whisper flew.
Ah ! faithless youth, twolwell you saw my pain,
For eyes the language of the soul explain.

—*Araminta : Gay.*

Take music too. Compare the subtle modifications characterizing successive phrases in even a simple melody of Mozart, like the first of the following examples, with the monotonous cadences of an ordinary street song, such as is represented in the second.



—*Lied der Freiheit : Mozart.*



—Co-ca-che-lunk: College Song.

A similar truth is illustrated in painting and sculpture. As will be shown by and by, the most important essential of excellence in the forms of these arts is caused by effects resulting from innumerable repetitions and correspondences; yet, perhaps, the most invariable characteristic of inartistic pictures and statues is a lack of sufficient diversity, colors too similar, outlines too uniform. See Fig. 6, page 27; and contrast it with the more artistic management of similar effects in "The Soldier's Return," Fig. 52, page 176. So, too, with architecture. Notice the conventional fronts of the buildings on many of the streets of our cities. Their accumulations of doors and windows and cornices, all of like sizes and shapes, are certainly not in the highest sense interesting. For this their outlines are too little varied.[1] When we have seen a few of them, we have seen all of them. But, in order to continue to

[1] Yet often too greatly, as by ten stories next door to only two.

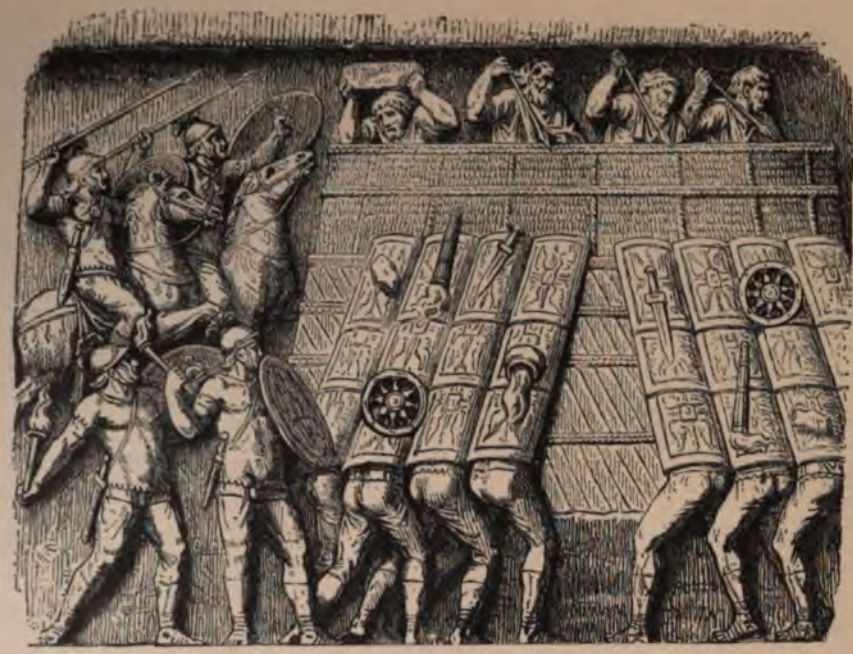


FIG. 6.—ROMANS BESIEGING A GERMAN FORTRESS.
(COLUMN OF M. AURELIUS, ROME.)

See pages 16, 26, 174, 182.

interest the mind, forms must continue to present to it something that has not been seen before. All these facts show that even though an art-product is constructed, in the main, upon the principle of putting like with like, a lack of likeness is sometimes desirable in order to introduce into the form that element of change[1] which in poetry and music is necessary to the effect of movement, and in painting, sculpture, and architecture, to the effect of life, which is closely allied to that of movement.

It is important now to notice further that if occasional unlikeness is to be introduced into a form, the more apparent the unlikeness is, the more satisfactory often is its effect. In this case the dissimilarity attracts more attention both to itself and to the general method of comparison which it opposes. No form appears to be so individual in character as when it is thrown into relief by the proximity of other forms between which and itself the difference is radical; as the figure of a man, for instance, when surrounded by natural scenery; or as a smooth young face when surmounted by the gray hair of a wig. In addition to this, it is worth remarking that in the degree in which unlike features are the most distinctly *antithetic* they show the clearest possible consciousness on the part of the artist that comparison is the main process employed, and that variety is exceptional. No one can originate or recognize an antithesis—by which is meant an effect produced when two objects differ diametrically in at least one particular, and yet agree in others—except as a result of comparison. For all these reasons contrast, when used within proper limits, is a legitimate artistic method.

In literature, for instance, every well-written page is full of contrasts expressed either directly, as in "Open rebuke is better than secret love," "Gold cannot make a man

[1] Compare with this what is said on pages 139, 189, and 258.

happy any more than rags can render him miserable"; or else indirectly, as in Lord Chatham's question, when opposing the war against the American colonies: "Who is the man that has dared to call into civilized alliance the wild and inhuman inhabitant of the woods, to delegate to the merciless Indian the defence of disputed rights, and to wage the horrors of his barbarous war against our brethren?"

Of course, the same principle is exemplified in literature put into the form of poetry.

> In peace there 's nothing so becomes a man
> As modest stillness and humility;
> But when the blast of war blows in our ears,
> Then imitate the action of the tiger.
>
> —*Henry V.*, iii., 1: *Shakespeare.*

> A light wife doth make a heavy husband.
>
> —*Merch. of Venice*, v., 1: *Idem.*

To apply the same principle to poems considered as wholes, what could make characters as disingenuous as Shakespeare's Desdemona and Ophelia, or even as his Othello, Hamlet, and Lear, manifest their distinctive traits so well as the surging mass of plotting and passion by which we find them surrounded? See also the quotations, beginning on pages 138 and 139.

In music, too, what can cause the individuality of a melody to stand out in clearer relief than the contrast afforded when it is alternated with what are termed variations, or is projected from a background of harmonic modulations that move up while it moves down, or that pass from one key into another, while it, considered in itself, does not necessitate such transitions? Notice the music on pages 60 and 67. Sudden and sharp antitheses are produced in this art in ways, too, less distinctively musical.

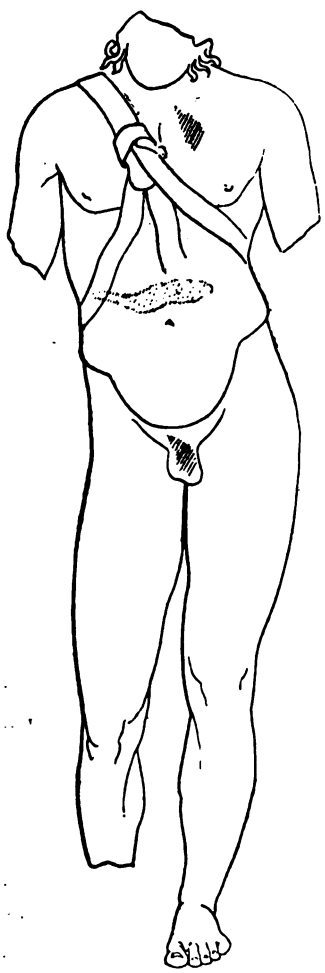


FIG. 7.—STATUE OF EROS IN BRITISH MUSEUM.

See pages 31, 186, 289.

Once, when it was my good fortune to hear Allegri's "Miserere" sung in the Sistine Chapel at Rome, on a Good-Friday, the performance was introduced by an extremely monotonous chant, which seemed to last for hours, though possibly for less than one hour. But when, at last, the chant glided into the grand chords of the "Miserere," the effect of the contrast between the two was so thrilling that one could imagine that of itself it could be enough to make an ordinary composition sound like a strain from a chorus of angels.

The same principle is not less operative in the arts that are seen. It explains why folds of drapery, or the straight lines of a girdle band, niche, porch, or pedestal increase, as we must often have remarked, the effectiveness of a human figure in connection with which they are depicted. Observe, in the principal form in Gérôme's "Pollice Verso," Fig.

26, page 81, the contrast between the bare flesh and the helmet and other mailing; also how much, even as represented here in outline, the slight band over the shoulder of the "Eros" of the British Museum, Fig. 7, page 30 adds to the general charm of the whole. Notice, too, how much would be lacking to the effect of Claude's "Evening," Fig. 40, page 119, as well as of Turner's "Decline of Carthage," Fig. 51, page 175, did either not contain the comparatively few figures of people in the foreground. For the same reason, shrubbery, trees, and mountain

FIG. 8.—See page 31.

scenery augment the attractiveness of houses or towers by which we find them surrounded. See the "Montigny Chateau in the Valley," Fig. 72, page 221. As applied to the forms of architecture considered in themselves, too, the same is true. Notice the round face of the clock in the chateau just mentioned. Ruskin, in his "Elements of Drawing," Letter II., illustrates a similar effect by drawing a small iron ring, not corresponding to anything about it, against one wall of a square and angular set of battlements (Fig. 8) and says with reference to the sketch: "All

would have been unsatisfactory if there had not happened to be that iron ring on the inner wall, which by its vigorous black circular line precisely opposes all the square and regular characters of the battlements and roof"; and draws the inference that "It is quite singular how very little contrast will sometimes serve to make an entire group of forms interesting, which would otherwise have been valueless."

In a similar way, a single ray of light, bursting through the clouds of a storm-piece, often both heightens the effect of gloom and introduces into the whole an element of cheerfulness. So, too, with a bright-hued flower, amid the green of a forest, and a bit of gilding on a cloud against the blue of the sky. They answer the same purpose as the round ring amid the angular forms of the sketch drawn by Ruskin. The whole of Jules Breton's picture, at one time in the New York Metropolitan Museum, entitled "Brittany Washerwoman," is enlivened by a very little red introduced for this purpose on the bodice of a single woman. Of course, it needs to be borne in mind that in all the arts, as indeed in nature, the number of features introduced for the sake of contrast should be comparatively small. Only in this case can they be kept subordinate, as they always should be, to effects that fulfil the predominating requirement of comparison.

We pass on to consider the methods of classification that are traceable to the influences of *mind and nature combined*, or, as we may say now, of *unity and variety*. Here we need not dwell long. Any class composed of both like and unlike factors necessarily has *complexity*. So has any single form of art or of nature. These statements need no proof.

Again, if so far as factors are alike they involve *com-*

parison, and so far as they are unlike they involve *contrast*, it follows that, so far as they are both like and unlike, and yet must both appear to be parts of the same unity, whether of a class or a form, they must involve what we term *complement*. Two things are complements when they contrast, and yet, as they appear together, complete the one thing to which they equally belong. They must be regarded, too, in classification, because every department of nature is full of them. Certain kinds of metals and ores, leaves and branches, males and females, alike in some regards, unlike in others, are always found together, and are both necessary to the realization of the type. So in the arts. In those of sound, high and low tones contrast; and yet, if we are to have rhythm, melody, or harmony, both are necessary. In the arts of sight, light and shade contrast; and yet, if we are to represent the effects of forms as they appear in sunlight, both are necessary. In colors, again, certain hues, like red and blue-green, contrast; and yet as both, when blended together, make white, both may be said to be necessary to the completeness of light. In all these cases the contrasting factors are termed complements. The principle which underlies their use is closely related, both in reality and in ordinary conception, to the developments of it in *counteraction* and *balance*. For this reason there is no necessity of illustrating it until we come to treat of them. Enough has been done for our present purpose in merely indicating the fact of its existence, and its influence in producing effects of unity, notwithstanding the presence of contrast.

CHAPTER III.

ORDER, CONFUSION, COUNTERACTION, PRINCIPALITY, SUBORDINATION, AND BALANCE IN CLASSIFICATION AND COMPOSITION.

Order—Follows Variety and Complexity, Owing to a Reassertion of the Mind's Requirements—Confusion, in Poetry, in Music, in the Arts of Sight—Counteraction—Its Influence in Classification—In Art—In Poetry—In Music—In the Arts of Sight—Principality—Connection between the Mental Conception and the Object Forming the Nucleus of the Class—Balance—Its Relations to Complement, Counteraction, and Symmetry—To Twin Products in Nature.

TO attain unity of effect has been said to be the primary aim of all efforts at classification and art-composition. When, owing to variety and complexity, this aim cannot be attained through a use of forms as they exist in nature, it must be attained through a method of using them; in other words, through *order*. Order, in fact, cannot be defined better than by saying that it is an arrangement of factors in accordance with some apparent method. No matter what the particular method is, so long as any is visible, order is visible. A number of straight sticks thrown carelessly upon the ground, one upon another, and crossing at all conceivable angles, are usually in disorder, but if we make them parallel, either lying down or standing up; or make them cross or radiate at like angles or from like points,—in any such cases, though differently obtained, we have effects of order: and we could apply a similar

principle to the blending of colors or tones. The important fact is that order is a result of method. This being so, everything that is to follow in the present volume has to do with it as differently developed in different circumstances; and we need not stop to illustrate its general effects.

Notice, however, its relationship to the line of thought that is now being followed. *Order* results from an assertion of the mind's requirements, notwithstanding opposing conditions of nature. When, owing to these, the effect of *unity* cannot be obtained—because it does not exist—in a likeness manifested in all the members of a class, the course pursued is something like this. Thought contents itself with likeness manifested in a few forms, which are then grouped so as to emphasize their similarity. The moment that this grouping is begun, there begins to be some *order*. But only later does it come to have its perfect work. Very soon slight differences are seen to separate even the members that at first seemed alike, while the differences that at first seemed to separate others are diminished. Finally, throughout all nature it is found that there are links enabling one to connect every class with others on both sides of it, and thus to connect all possible classes together. When an attempt is made to do this, the factors composing each class, and also the classes composing all those of nature, come to be grouped according to their degrees of difference in a regularly graded series. We may express this fact by saying that the classes and the system of classification as a whole come to have *group-form*. Only when this result is reached is the work of order completed. Of course the same principle applies to the bringing together of the factors composing any given art-form.

When the conditions of nature necessitate such an effect of variety that there is no order, we have that lack of arrangement preceding and necessitating classification which is termed *confusion*. But, because confusion exists in nature, it may sometimes be legitimately introduced into art. It is this fact that in poetry justifies an occasional, but only an occasional, use, when demanded by confusion of thought, of mixed metaphors. In these, terms rightly characterizing different objects or conditions which are compared, are used when referring to the same object or condition. Of course the effect conveyed is that the mind does not clearly distinguish the two but confuses them; *e. g.*:

> Or take up *arms* against a *sea* of troubles,
> And by opposing, end them.
> —*Hamlet*, iii., 1: *Shakespeare.*

So with ellipsis, in which a phrase or sentence, before being completed, is interrupted by another. This causes the meanings of both to be confused; *e. g.*:

> O life, life-breath,
> Life-blood,—ere sleep come travail, life ere death.
> This life stream on my soul, direct, oblique,
> But always streaming. Hindrances? They pique—
> Helps? Such . . . but why repeat, my soul o'ertops
> Each height, than every depth profoundlier drops?
> Enough that I can live and would live. Wait
> For some transcendent life reserved by Fate
> To follow this. O never. Fate I trust
> The same, my soul to; for, as who flings dust,
> Perchance—so facile was the deed, she checked
> The void with these materials to affect
> My soul diversely—these consigned anew
> To naught by death, what marvel if she threw
> A second and superber spectacle
> Before it?
> —*Sordello*, book vi.: *Browning.*

Broken rhythm in the same way illustrates confusion of form; *e. g.:*

> Let me behold thy face. Surely this man
> Was born of woman.
> Forgive my general and exceptless rashness
> You perpetual-sober gods.
> —*Timon of Athens*, iv., 3: *Shakespeare.*

The same principle justifies in music the use of mere noise, as in the sounds of gongs, cymbals, drums, or of accompaniments or interruptions of any kinds, that introduce into the melody or harmony discrepancy or discord. It justifies, in the arts of sight also, whether painting, sculpture, or architecture, the representation of the appearances on trees or vines of leaves and branches when they seem like mere daubs of color in the distance, also of wool on sheep, and of hair, if at all disordered, on the human head, as well as of mixed and broken effects of different patterns, sizes, and colors, in the wood, stone, and glass of lattice-work, masonry, and windows. Notice the foliage covering the left wing of the "Chateau of Montigny," Fig. 72, page 221, also some of the work in the "Ancient Koran Case," Fig. 9, page 38, in the "Window of the Alhambra," Fig. 74, page 225, and in the "Arch in the Aljaferia," Fig. 96, page 290.

It is evident, however, that although a little confusion, like a little contrast, may sometimes, by way of variety, add greatly to the attractiveness of that with which it is associated, it nevertheless needs to be used in such a way as to suggest the dominance of unity and order. How can this be done? A little thought will reveal to us that, even in connection with confusion, order can manifest itself, and manifest itself clearly by way of *counteraction.* Nature, even to the primitive man, could not have seemed wholly

chaotic, from the moment that experience of night and day and seed-time and harvest had enabled him to recognize order behind them. So an animated tangle of wool

FIG. 9.—ANCIENT KORAN CASE (ESCURIAL LIBRARY, SPAIN.)
See pages 37, 224.

or hair does not have the effect of mere confusion, from the moment that a glimpse of a method of contour with which we are familiar shows that it belongs to the order

of the dog or the sheep. In such cases, recalling that both order and confusion are effects, we can say that what confusion or variety needs, before any effect of unity or order is produced, is *counteraction.* Carl Blanc, indeed, in the introduction to his "Art in Ornament and Dress," terms it "balanced confusion." By this he means that which keeps confusion within the compass of some rhythm, tune, form, or color; and causes the whole, in spite of opposing elements, to manifest method. If he applied his thought to music, he would mean that which causes gongs or drums to be struck so as to augment the rhythmic effect of the general movement. Applied to painting, at all events, he means that which causes tangled masses of wool, or foliage, to hang about animals, trees, or towers, in such ways as to introduce more or less variety into the order that in general characterizes them. He means that which, through the use of a background of mathematical architectural forms, holds together and makes a unity of the otherwise confused groups of men in Raphael's "School of Athens." See Fig. 10, page 41. But the term *balance*, as we shall find hereafter, has a slightly different meaning from that which he assigns to it, while *counteraction* would answer all his purposes.

Counteraction, it is true, underlies *balance;* but it is a principle of different and broader applicability. We have noticed some of its uses in connection with *confusion.* But these uses are as wide in their range as the whole field of art-production. It is not too much to say that, without counteraction, it would be impossible to turn the formless *confusion* of nature into any art-forms whatever. To go back to classification in order to show this, suppose that we are dealing with the bats. They have hair, teeth, and other characteristics that make them

compare with the mice, or belong to that order; but besides this they have wings, and these cause them to contrast with the mice, and to be confused with the birds. It is evidently appropriate to say that the two conditions counteract each other.

This fact, moreover, has other effects. It gives a class, as a whole, a mixed character, which causes certain of its members to be allied not only to it, but to other classes, between which and it, therefore, these members serve as connecting links; as the bat does between the mammal and the bird, and as the seal between the mammal and the fish. It is counteraction, therefore, that enables us to perceive upon what other classes on different sides any given classes, metaphorically speaking, border. It is this that enables us to assign limits or outlines to different groups, as well as to bring together those that are the most nearly related. In other words, counteraction furnishes us with the first condition of that which, as applied to individual or collective factors, we may term *form*.

This will appear more evident as we go on to consider *counteraction* in art-composition. Here it is manifested whenever we have in the same product or part of a product opposing effects. We have to show that these exist almost universally, and that, whenever found, they are necessary to the constitution of the form. The fact that they exist is so patent that it is remarkable that more attention has not been directed to it.

Corresponding to the double character—spiritual and material—of all the phenomena of life, we find necessarily present in almost every sound, whether produced in nature or in art, syllables or notes of long and short duration, loud and soft force, upward and downward pitch,

FIG. 10.—SCHOOL OF ATHENS.—RAPHAEL.

See pages 39, 82, 242.

and full and thin quality. We find in almost every object of sight, lines of opposing length and shortness, perpendicularity and horizontality, curvature and straightness; and colors of opposing light and shade, gayety and graveness, brilliancy and dulness. This is true not only of products considered in whole but in part. In a comic utterance of the expression "All I live by is the awl," the latter single syllable contains opposing elements of sound of every possible variety—duration, force, pitch, and quality. And one can hardly paint a single plum hanging in the sunshine without something to suggest every possible opposing element of sight.

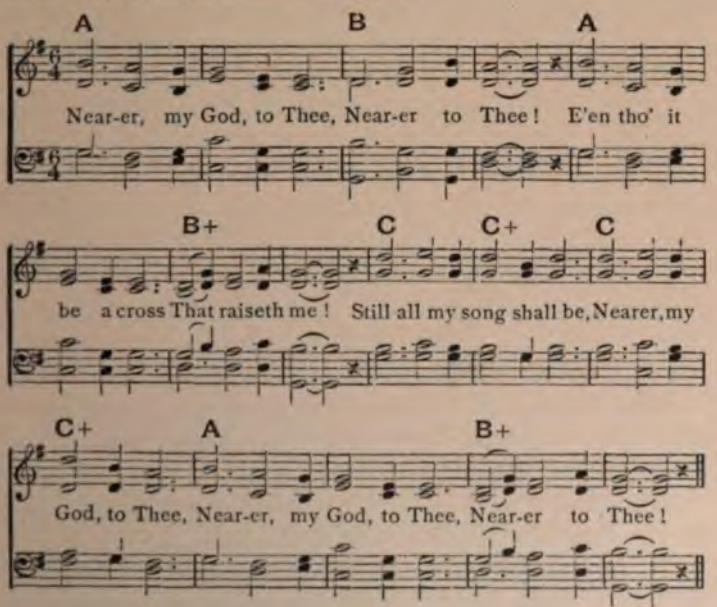
But to mention a few particulars, the measures of poetry and music owe their origin to a combination of accented and unaccented parts. Without both of these they could not exist. As a rule, too, they must manifest every possible kind of counteraction; contain, that is, both long and short, loud and soft, upward and downward, high and low, and full and thin tones. Very often, too, in poetry, and almost invariably in music, successive phrases as they follow each other, also oppose each other in certain characteristics of their movements.

Notice how this is true in the following:

> Or, if on joyful wing,
> Cleaving the sky,
> Sun, moon, and stars forgot,
> Upward I fly.
> —*Nearer my God to Thee: S. F. Adams.*

In music, most of us know what is meant by counterpoint, a form of composition which, for our present purposes, might be said to be a combination of opposing effects about a single point. Most of us too are acquainted with the terms thesis and anti-thesis, strophe and

anti-strophe. The very words suggest their relevancy in this connection. The principle underlying them may be illustrated in the upward and downward movements that in the following are set to the successive and contrasting lines marked A and B or B+, and C, or C+. This arrangement illustrates effects of counteraction, such as in this art are almost universal.



—*Bethany: L. Mason.*

A corresponding fact is exemplified in products of the arts of sight. We can scarcely copy or originate a form in any of these without having it exemplify all the opposing possibilities of outline and hue. Think of the innumerable deviations from straight lines to angles and curves in the contour of a single animal, and of the end-

less variety of the play of sunshine upon the colors of a single landscape. This counteraction, moreover, is not only actual, but necessary. It would be impossible for any visible object to have a definite shape unless there were at least two opposing tendencies of line giving it a contour and two of color giving it light and shade; and the same, as in poetry and music, is true of every part of the whole. This is so much more apparent here, than in the arts of sound, that there is no necessity of illustrating it.

In making a practical application of the requirements of order and of the methods associated with it, some member of a class is always considered first, after which are arranged in order second, third, fourth, and other members. But of all these, the first is evidently the most important. It is the nucleus about which the others are grouped; and, theoretically considered, we should judge that it would be typical of them all. Practically, too, it is so. Classification is invariably begun by observing a few details characterizing some one form—say a palm-tree or a wolf—to which is given what is sometimes termed *principality*. About this form are then grouped other forms, all of which are said to belong—as the case may be—to the palm family or the wolf family.

As preparatory to recognizing the exact analogy between this method and what is done in art-composition, it is important to recognize that, in connection with the observation of the object which forms the nucleus of the grouping, there inevitably arises in the mind a mental conception which becomes the ideal criterion to be applied to every member admitted to the class. At first, however, this conception and the object are apprehended together in such a way that the mind cannot dissociate

the two. In the case just mentioned, for instance, the conception of the palm or wolf is merely that which is represented in the form of this particular tree or animal, and *vice versa*. So, as we shall find by and by, the conception of a theme in poetry, music, painting, sculpture, or architecture is virtually identical with a particular form apprehended by the mind. When this form or, if it be only such, this feature is given *principality*, it follows, as an axiom, that all other forms or features associated with it must be given *subordination*. This is so evident, and so evidently necessitated as a condition accompanying principality of any kind, that the statement needs no illustration.

Once more, wherever there is a principal factor and also a subordinate or many subordinate factors, the endeavor to arrange them together leads to a consideration of what is termed *balance*. Balance is an effect of equilibrium obtained by arranging like features on both sides of a real or ideal centre. It makes no difference whether they are alike in quantity, which is the first suggestion given by the word, or in quality,—in actuality or in mere appearance. All that is necessary is that in some way they should be or seem alike. In this regard *balance* differs from either *complement* or *counteraction;* for in both of these the essential consideration is unlikeness. At the same time, all three have much in common. One arm, for instance, thrust forward from a bending body and one leg thrust backward from it, may contrast strongly both in appearance and position; and in this regard may resemble complement. Undoubtedly too they counteract each other. But because they present an appearance of equilibrium in that like quantities seem to be on each side of the centre, our first thought is

not that they complement or counteract but that they balance. Notice this too in the groupings in Fig. 49, page 161.

The close connection between these three, *complement*, *counteraction*, and *balance*, accounts for the fact that in ordinary language and conception they are not clearly distinguished. Nor is it often important that they should be. In one regard, at least, they are all alike. They are all developments of the same principle. *Complement* produces unity in a natural way from things different. *Counteraction* applies the principle underlying complement to things that are not complementary by nature, and produces, as we have seen, effects that are essential to the very existence of form. *Balance*, going still farther, applies the same principle to things that are neither complementary nor counteractive, in such a way as to give a more satisfactory appearance to the form by adding to it the effect of equilibrium. A still later development of the same principle, preceding which, however, there need to be some intervening stages, results in symmetry.

In this regard these four, *complement*, *counteraction*, *balance*, and *symmetry*, are related, as we shall find hereafter, in much the same way as are *comparison*, *congruity*, *repetition*, and *consonance*, as well as many other of the art-methods arranged in the same columns in the list on page 131. *Complement* and *balance* are especially related because they are practically inseparable. Between complements, as between red and blue-green, there is often great apparent difference, but at the same time, there must be a ground of resemblance. Between balancing factors, as between red on one side of a picture and red also on its other side, there is usually great apparent likeness, but at the same time there is often a ground of difference. These being the conditions, the factors to which

the one or the other term can apply, according as they are less or more alike, fluctuate all the way between two extremes, at one of which there is only *complement*, and at the other only *balance*. But where the two separate

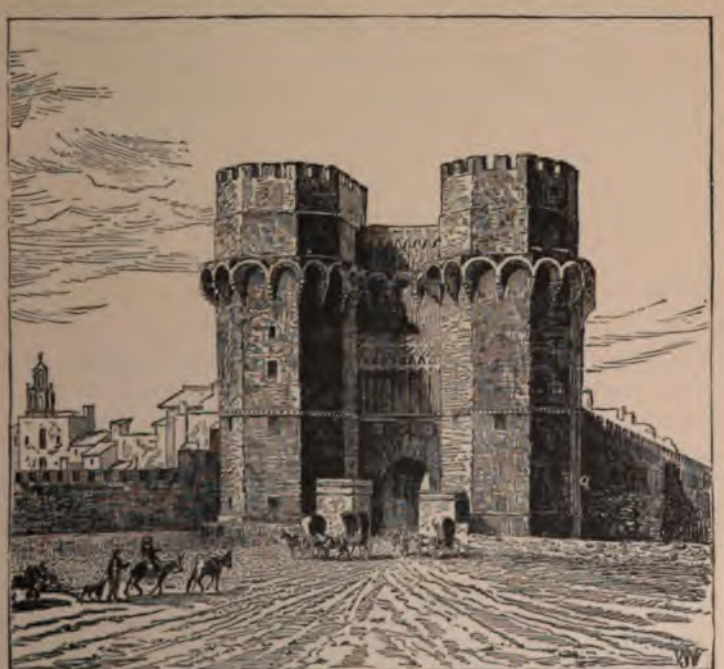


FIG. 11.—GATE OF SERRANO, VALENCIA, SPAIN.
See pages 48, 79, 87, 96.

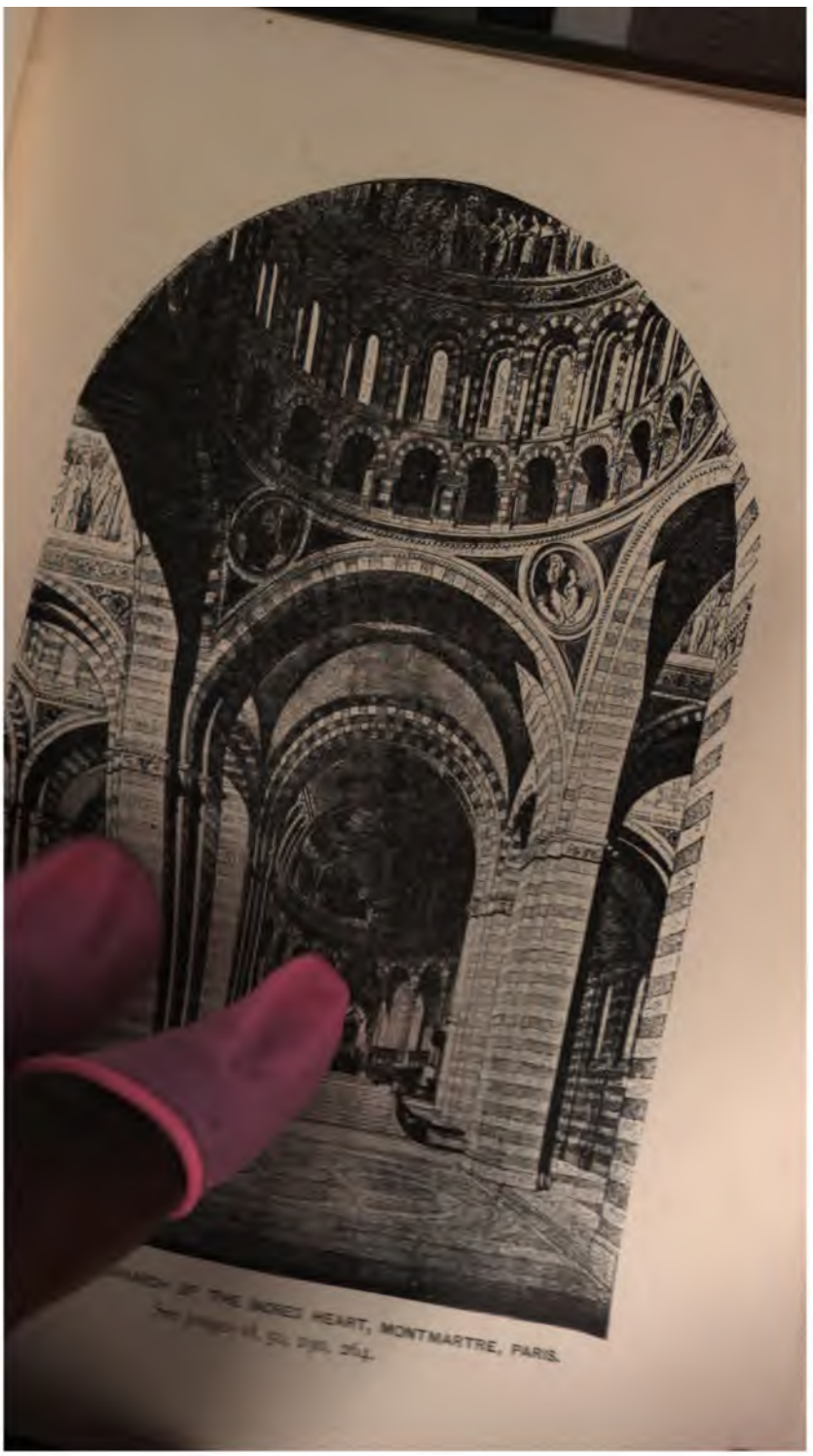
it is impossible to determine. All that we can know definitely is that somewhere between the extremes, we are furnished with all the data necessary to explain any and all of the arrangements based upon the principle from which both spring. For this reason, in giving illustrations

from the different arts, no endeavor need be made here to separate clearly those that exemplify complement from those that exemplify balance. The two terms will be used almost interchangeably, in recognition of the fact that sometimes that which the one represents, and sometimes that which the other represents, is most prominent; and that both are really necessary in order to account for all the conditions. For instance, a desire to perceive effects of balance alone, as the word is ordinarily understood, does not fully explain why both in the external world and as represented in art, man derives satisfaction from twin trees, towers, houses, and figures of men and animals; as in Fig. 11, page 47; as well as in the "Investment of a Bishop by a King," Fig. 25, page 80. Read, too, what is said of a painting by Turner when illustrating repetition in connection with Fig. 66, page 203. But the moment that we recall that nature is full of twin effects, some of them as unlike as a pair of chickens, some as like as a pair of sparrows, we see, sufficiently for our purpose, without making too nice distinctions, how, in the principle underlying both *complement* and *balance*, art got the warrant for its method. The effects in nature illustrating this principle thus considered, too, may differ in almost all degrees possible. They may be as unlike as heads and feet, or as the top and the bottom of a tree; or as alike as two eyes, ears, arms, and wings. To the relations between some of them we should naturally apply the term balance; but it is not even questionable whether, had art not rendered it allowable, we should apply it in all cases.

In arranging *principal*, *subordinate*, and *balancing* factors, the *principal* and one or more of the *subordinate* are sometimes balanced; sometimes two or more of the *sub-*

FIG. 12.—THE CHURCH OF THE SACRED HEART, MONTMARTRE, PARIS.

See pages 18, 50, 190, 264.



...OF THE SACRED HEART, MONTMARTRE, PARIS.

ordinate; and sometimes both those conditions exist. This general fact can scarcely fail to reveal itself to the most superficial glance at any art-product. A few notes —only the suggestion, perhaps, of a melody—furnish a form and with it a *principal* theme expressive of some musical idea. Other *subordinate* series of notes, supposed for some reason to be more or less like the first, or, if not, at least *complementing*, *counteracting*, or *balancing* it or each other, are arranged in order about it, and through the use of them is developed a work like a symphony. A few phrases containing certain accented and unaccented syllables, perhaps only one word like the "Nevermore" of Poe's "Raven," furnish a form and with it a principal theme expressive of some poetic idea; and by a similar process there is developed a whole epic or lyric. A few lines or colors constituting a face or feature, sometimes merely a flush, smile, or gesture full of grace and meaning, furnish a form and with it a principal theme suggestive of pictorial treatment; a few angles or arches constituting part of a door, a window, a gable, a tower, furnish the same, suggestive of architectural treatment, and from them in a similar way are developed a painting, a statue, a palace, a cathedral. Notice how all the forms used in the interior of the "Church of the Sacred Heart," of Paris (Fig. 12, page 49), are built upon the primitive conception in the Norman arch.

As with the other art-methods, these methods, too, are suggested by conditions found in nature. In hearing the song of a bird or a man, we may observe chiefly the time filled by the different tones or their movements up and down the scale; in looking at a tree we may observe chiefly the outlines formed by its leaves, branches, or general contour, or by its color; but whatever we may

observe, it seems to be a law of the mind that usually only one of the many features perceived attracts special attention. The fact that this is so, has much to do with causing the song or tree—notwithstanding the different effects of its component parts—to appear to be one thing and not many. That which attracts special attention in these cases—whatever it may be—is that which seems to the observer to have *principality*. Everything else, of course, appears *subordinate*, while the degree in which all the factors together—whether principal or subordinate—blend so as to suggest the completeness or equilibrium of the whole gives the measure of the *complement* or *balance*.

CHAPTER IV.

INCIPALITY, SUBORDINATION, AND COMPLEMENT OR BALANCE IN POETRY AND MUSIC.

ncipality in the Arts of Sound Involves Something Kept Constantly before the Mind—Principality of Theme in an Epic—In a Drama—Of Form in the Blank Verse of Long Poems—Of Short Poems as in the Chorus—In the French Forms, Rondel, Triolet, Kyrielle—In the General Movement as Representing the General Thought—Illustrations —Principality as Illustrated by Musical Variations—And in Other Longer and Shorter Compositions—Subordination and Complement or Balance in Poetic Themes—In Poetic Form—In Pairs of Lines in

produce a single dominant impression must be connected with something kept constantly before the mind. In other words, the principal feature, so far as it pertains to the thought, must be suggested by constant references to the thought; so far as to the form, by constant recurrences of it.

In an epic the principal thought may be some grand event of historic or religious importance, to which all the other events that are mentioned are subordinate, mainly serving, by way of comparison or contrast, to give it greater prominence. Notice how the keynote of the whole of Homer's "Odyssey" is struck and foreshadowed in its opening sentence:

> Tell me, O muse, of that sagacious man
> Who, having overthrown the sacred town
> Of Ilium, wandered far and visited
> The capitals of many nations, learned
> The customs of their dwellers, and endured
> Great sufferings on the deep; his life was oft
> In peril, as he labored to bring back
> His comrades to their homes.
>
> —*Bryant's Trans.*

The same method, as exemplified in the beginnings of both Homer's "Iliad" and Virgil's "Æneid," will recur to most of us. Here too is Milton's first sentence in the "Paradise Lost":

> Of man's first disobedience, and the fruit
> Of that forbidden tree, whose mortal taste
> Brought death into the world and all our woe,
> With loss of Eden, till one greater man
> Restore us and regain the blissful seat,
> Sing, Heavenly Muse.

Equally effective, for a similar reason, is the opening of the "Sigurd the Volsung" of William Morris:

There was a dwelling of kings ere the world was waxen old ;
Dukes were the door-wards there, and the roofs were thatched with gold ;
Earls were the wrights that wrought it, and silver nailed its doors ;
Earls' wives were the weaving women, queens' daughters strewed its floors,
And the masters of its song-craft were the mightiest men that cast
The souls of the storm of battle adown the bickering blast.

In a drama, principality may be given to some character like Hamlet or Lear, to whom all the other characters and all their actions are in some way subordinated. Let it be borne in mind, however, that in all such cases the effect is enhanced by the degree in which whatever has principality in thought is embodied in a principal form. In poetry this latter may be a certain number of words constituting a line of verse ; and in music a certain number of notes constituting a phrase.

Long poems, in which the thought can be brought out only by describing a series of very different events or quoting words of very different characters, necessitate a form capable of being varied to the greatest possible extent without losing its distinguishing characteristics. Such a form we have in blank verse, either regular or broken ; and, as much because it fulfils the requirements of principality as for any other reason, it is generally recognized, in the poems in which it is used, as something which imparts to them, however long or complicated they may be, an effect of unity. For this reason, as well as for others, those who imagine that a "Paradise Lost" or "Idyls of the King" would be as valuable contributions to art as they are, were they composed without metre or verse, like some of the works of Whitman, are either destitute by nature of æsthetic sensibility or have not had their natural endowment sufficiently cultivated. Before they can become entitled to leadership in the fields of criticism, they need either to be born again or bred again.

It is mainly, however, from shorter poems in which all effects are less complex that we may get the clearest illustrations of the method under consideration. The ordinary chorus or refrain at the end of successive stanzas, as a rule, illustrates principality. It epitomizes in a form constantly recurring all that the whole poem to which it is attached is intended to express; *e. g.:*

Home, home! sweet, sweet home!
Be it ever so humble, there 's no place like home!
—*Home, Sweet Home: Payne.*

The Star-Spangled Banner, oh! long may it wave
O'er the land of the free and the home of the brave.
—*The Star-Spangled Banner: Key.*

A similar effect is still more emphasized in some of the different French forms of verse, which of late years many of our younger poets with a somewhat overweening interest in mere mechanism have been imitating. As will be shown by and by, and as will be recognized by a single glance at the following poems, especially at their rhymes, repetition is their main characteristic. But they also illustrate very clearly the influence of principality.

How is it you and I
  Are always meeting so?
I see you passing by
  Whichever way I go.

I cannot say I know
  The spell that draws us nigh.
  How is it you and I
Are always meeting so?

Still thoughts to thoughts reply,
  And whispers ebb and flow;
I say it with a sigh,
  But half confessed and low,

How is it you and I
  Are always meeting so?
—*Rondel: John Cameron Grant.*

Lo, my heart, so sound asleep,
  Lady, will you wake it?
For lost love I used to weep,
Now my heart is sound asleep,
If it once were yours to keep,
  I fear you 'd break it.
Lo, my heart, so sound asleep,
  Lady, will you wake it?
—*Triolet: Justin Huntly McCarthy.*

In spring, Love came, a welcome guest,
And tarried long at my behest;
Now autumn wanes, the skies are gray,
But loyal Love flees not away.

I charmed him with melodious lays,
Through long, rose-scented summer days;
My songs no more are clear and gay,
But loyal Love flees not away.

We plucked and twined the myrtle flowers,
Made joyance in the sylvan bowers;
The blooms have died, wild winds hold sway,
But loyal Love flees not away.

Gone are the fifing crickets, gone
The feathered harbingers of dawn,
And gone the woodland's bright display,
But loyal Love flees not away.

With intermingled light and shade
The shifting seasons come and fade:
Our fond hopes fail, false friends betray,
But loyal Love flees not away.
—*Kyrielle: Clinton Scollard.*

Notice illustrations of the same method in the French forms quoted on pages 63, 107, and 196.

But many poems have no chorus nor refrain. In these the effect of principality is dependent mainly, sometimes exclusively, upon the method of movement, *i. e.*, upon the metre. In the following a ride on horseback is the principal conception. Observe how it is embodied in the movement of the opening sentence:

> I sprang to the stirrup, and Joris, and he;
> I galloped, Dirck galloped, we galloped all three.
> —*How They Brought the Good News from Ghent: Browning.*

And how the gait of the horses is echoed in the rhythm of the whole:

> So we were left galloping, Joris and I,
> Past Loos and past Tangres, no cloud in the sky;
> The broad sun above laughed a pitiless laugh;
> 'Neath our feet broke the brittle bright stubble like chaff;
> Till over by Dalhem a dome spire sprang white,
> And "Gallop," gasped Joris, "for Aix is in sight."
>
> —*Idem.*

Here the principal conception has reference to death. Notice how the slow and solemn movement of the rhythm everywhere represents this:

> The storm that wrecks the winter sky
> No more disturbs their deep repose
> Than summer evening's latest sigh
> That shuts the rose.
>
> I long to lay this painful head
> And aching heart beneath the soil,
> To slumber in that dreamless bed
> From all my toil.
>
> —*The Grave: Montgomery.*

And what could better give principality to a half doubting, half confiding mood than the arrangement of rhythm and rhymes in this?

With weary steps I loiter on,
  Tho' always under altered skies.
  The purple from the distance dies,
My prospect and horizon gone.

No joy the blowing season gives
  The herald melodies of spring,
  But in the songs I loved to sing
A doubtful gleam of solace lives.

If any care for what is here
  Survive in spirits rendered free,
  Then are these songs I sing of thee
Not all ungrateful to thine ear.
—*In Memoriam*, xxxviii. : *Tennyson.*

Here the idea of rocking a babe to sleep is uppermost:

Sleep and rest, sleep and rest,
  Father will come to thee soon ;
Rest, rest on mother's breast,
  Father will come to thee soon ;
Father will come to his babe in the nest,
Silver sails all out of the west
  Under the silver moon :
Sleep, my little one, sleep, my pretty one, sleep.
—*Lullaby from The Princess : Tennyson.*

Here is a movement to accompany a triumphant march:

Hail to the chief who in triumph advances.
  Honored and blest be the evergreen pine.
Long may the tree in his banner that glances
  Flourish, the shelter and grace of our line.
—*Song of Clan Alpine : Scott.*

Here is an exhortation to strike successive blows at tyrants:

Lay the proud usurpers low.
Tyrants fall in every foe,
Liberty 's in every blow.
Forward, let us do or die.

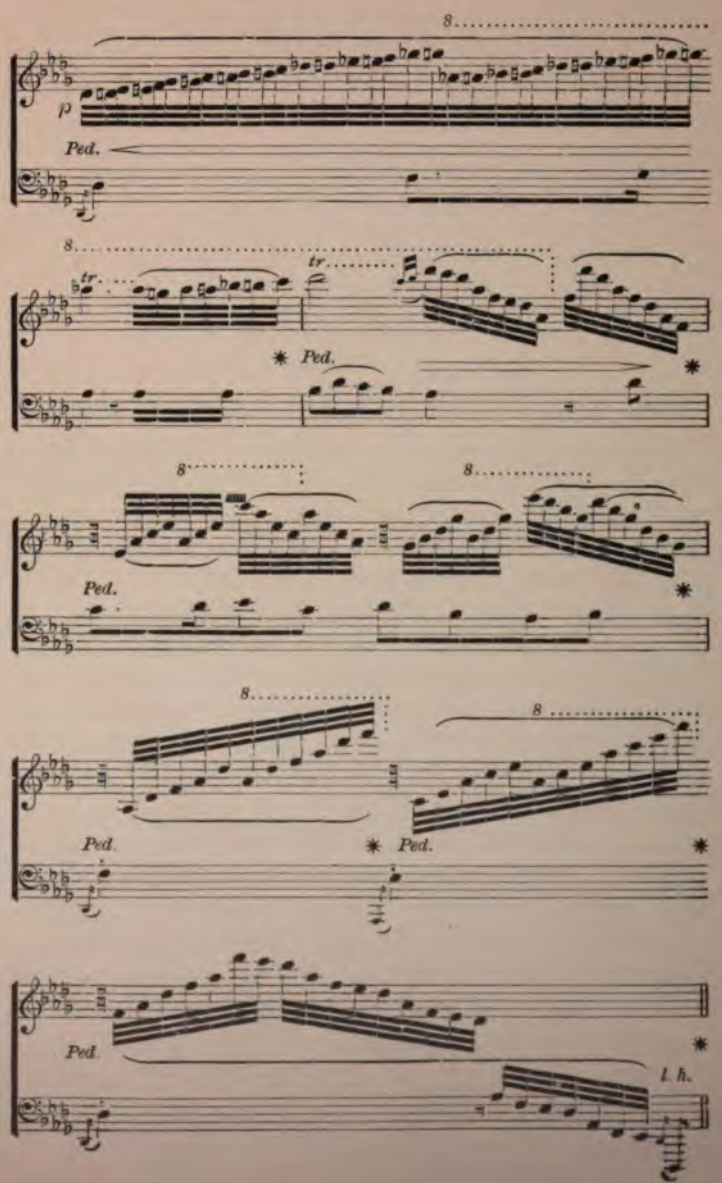
—*Bannockburn : Burns.*

And this represents riding on a railway :

Singing through the forests,
Rattling over ridges ;
Shooting under arches,
Rumbling over bridges ;
Whizzing through the mountains,
Buzzing o'er the vale,—
Bless me, this is pleasant,
Riding on the rail.

—*Railroad Rhyme : Saxe.*

Most of us will probably obtain the best conception of principality and subordination in music, by recalling the difference between a melody, as it is either sung or played upon an instrument, and that which is called its accompaniment. In this case, the former, of course, is the principal thing, and the latter, the subordinate. A more complete illustration of the same difference, because necessitating more elaboration in the subordinate features, is furnished by one of those compositions which are popularly called *variations*. In these, as we hear the repeated strains of a familiar melody, we have no difficulty in detecting the principal theme, notwithstanding great differences in the effects of duration, force, pitch, or quality. The following from the "Paraphrase de Concert," by Charles Gimbel, of Foster's popular "Old Black Joe," will illustrate this fact to the eye almost as clearly as to the ear. The lower, bass notes contain the melody, which is the principal thing ; and the upper notes the accompanying variations, which, like features in the background of a painting, are subordinate to the melody.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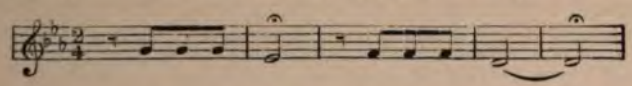
The same general method is pursued in almost every composition. In many of the more important of them, however, as in Beethoven's Symphony No. 5, in C minor,



the theme is more simple, consisting of only a few notes; and, at the same time, the developments are more complex, involving a greater departure from it. Both facts cause it to be more difficult to keep in mind and to recognize when it reappears. But unless one conversant with the methods of music can do this, the result is more or less inartistic. In shorter compositions, like ballads and hymns, the effect may be perceived by all. Notice, in the music printed on page 43, how the same movements, varied but slightly, are constantly recurring in successive lines, or pairs, or series of lines, like those marked by the same letters—namely A B, or A B+.

Now, let us consider *complement* and *balance* in these arts. As has been said, the complementary or balancing factors are sometimes the principal and a subordinate one, and sometimes are both subordinate. In the play of "Hamlet," the cool-headed, well-poised, consistent character of the intellectual Horatio complements that of the hot-headed, ill-poised, irresolute, but intellectual hero. At the time time, certain of the other characters, as Laertes and Ophelia, and the King and Queen, complement each other. In a sense, too, as if to show the connection of the parts with the whole as well as with other parts, they also complement certain characteristics of Hamlet.

Applying the same methods to form, we could say that in the following poem the principal metre consisted of a

line of four feet, or eight syllables; and if printed thus—as it might be—all the lines would contain exactly the same rhythmic quantities, and therefore would exactly balance.

From gold to gray our mild sweet day
Of Indian summer fades too soon.

But printed as it ordinarily is, the first two lines, while together balancing the third, still more effectually balance each other.

From gold to gray
Our mild sweet day
Of Indian summer fades too soon;
But tenderly
Above the sea
Hangs, white and calm, the hunter's moon.
—*Indian Summer: Whittier.*

The very common arrangement represented in this stanza, in accordance with which couplets, or two lines and not three, rhyme, while the rhyming lines, however widely separated, are of equal lengths, is clearly traceable to the prevalence in this art of this quantitative kind of balance.

Here again, too, the French forms of verse will prove serviceable by way of illustration. Any one who will compare the following poetry with the music on page 64 will have no difficulty in detecting in both the same method of securing complementary or balancing effects as are there explained. Just as in this, the phrase used in the first line is repeated in the fourth and seventh lines, while the first two lines are the same as the last two; so in the music the phrase set to the words in the first line is repeated in that set to the third and seventh lines, while the first two lines are very nearly the same as

the last two, Forms so evidently alike in principle may have arisen in poetry through attempts to imitate methods with which music first made the poets familiar. But it is more likely that these forms in both music and poetry sprang from a common source, the source to which are attributable all the methods of art-composition. This supposition is all the more likely inasmuch as the same characteristics, as will presently be shown, appear in the arts of sight, but so differently manifested that by no stretch of imagination is it conceivable that their appearance in the latter should have resulted from conscious imitation. Here is the poetry:

> Oh, Love 's but a dance,
> Where Time plays the fiddle:
> See the couples advance,—
> Oh, Love 's but a dance:
> A whisper, a glance,—
> "Shall we twirl down the middle?"
> Oh, Love 's but a dance,
> Where Time plays the fiddle.
>
> —*Triolet: Austin Dobson.*

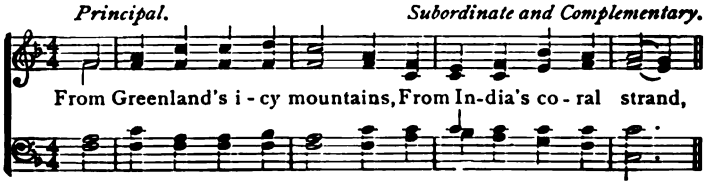
Once more, it is evident that the forms of verse as manifested in the arrangement, not only of its lines, but of its feet, constructed as these are out of regularly counteracting and alternating accented and unaccented syllables, owe their origin in part to the principle of balance. And what but a recognition of the artistic possibilities of a fulfilment of the same principle leads poets, and prose-writers too, to use so many pairs of words having the same sense or sound? With Swinburne this arrangement is so common as to have become a mannerism:

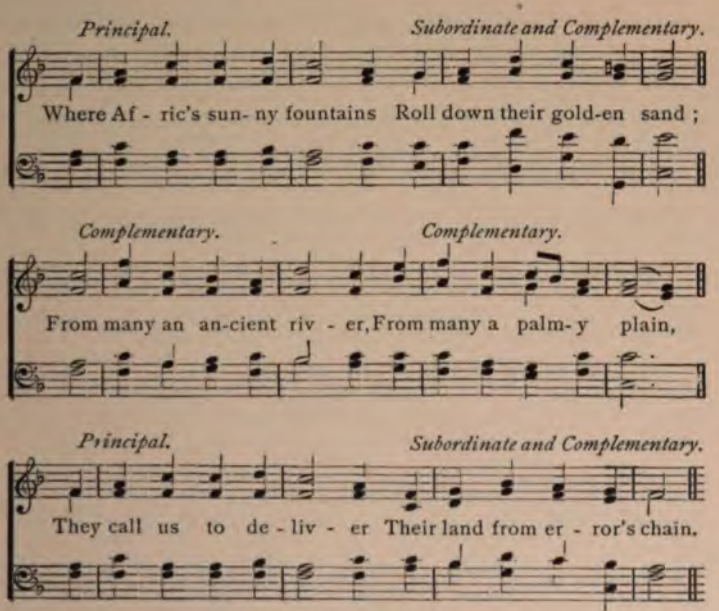
> Naked, shamed, cast out of consecration,
> Corpse and coffin, yea the very graves,

Scoffed at, scattered, shaken from their station,
Spurned and scourged of wind and sea like slaves,
Desolate beyond man's desolation,
Shrink and sink into the waste of waves.
—*By the North Sea: Swinburne.*

The same methods are equally manifest in musical effects. To go back to the compositions termed *Variations* that were mentioned a moment ago, if the melody in them that furnishes the theme be the principal thing, it is evident that all the different forms of variation, while subordinate to this, are also complementary. It is equally evident that they are all complementary of each other. Indeed, the frequency with which a high or fast movement is placed in immediate juxtaposition to a low or slow movement cannot be explained except by supposing an intention to produce this effect.

In the following typically arranged melody, the principal theme may be said to be contained in the first five bars. Notice how this is at once repeated so as to emphasize its principality; but with one complementary change in the ninth and tenth bars. Then follow five more bars wholly complementary of the theme; then five more in which the theme is repeated again with a slight change in the last two measures. A precisely similar arrangement, too, except that the principal theme occupies four instead of five bars, will be found in the music on page 43.

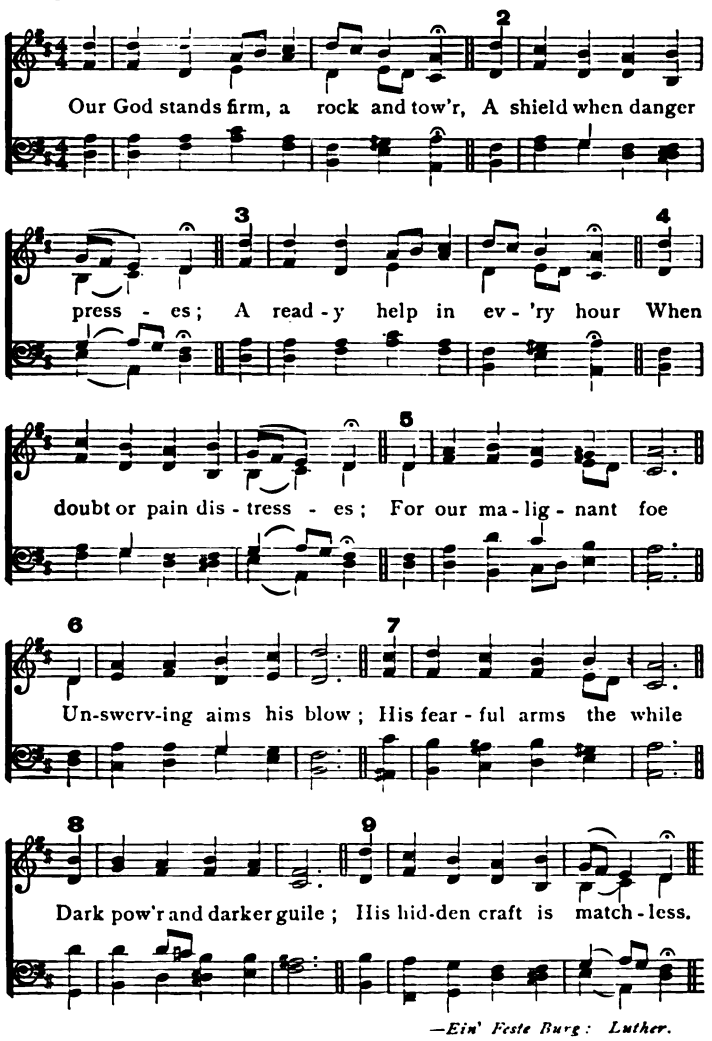




—*Missionary Hymn: Lowell Mason.*

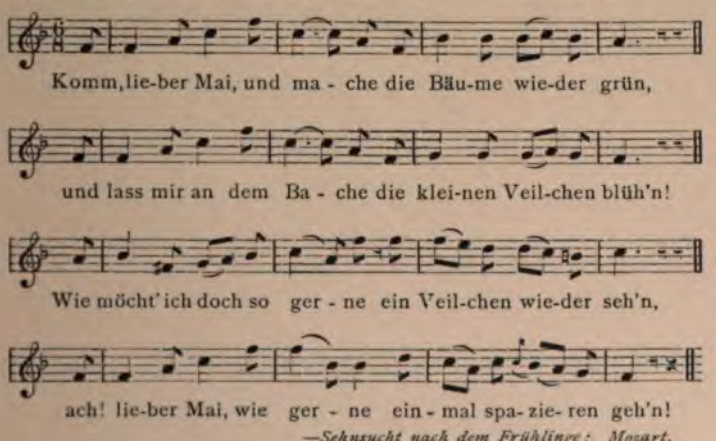
Not only are the movements set to the fifth and sixth lines of this stanza complementary of the principal theme, but, as will be noticed, those set to the second and fourth, as well as to the sixth and eighth lines, are mutually complementary. So important is complement of this sort to the effect of music, that it is hardly possible for a phrase to be introduced into a composition without an accompanying complement and not produce an effect of incompleteness that will be felt, even though, as is very likely, it cannot be explained. However we may admire the following, who can ever hear its eighth line without wishing that it had been omitted, or that another line had been added somewhere? The

reason for this is that there is nothing to balance or complement it.



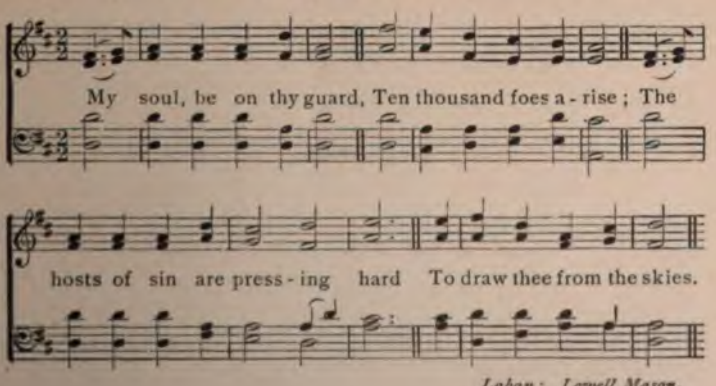
—*Ein' Feste Burg: Luther.*

In addition to what has been said, notice also how uniformly in almost all compositions of this kind every two or three measures in which the notes move upward are followed by two or three in which they move downward.



—Sehnsucht nach dem Frühlinge: Mozart.

Very often, too, one part is complemented or balanced by another. In the following, when the soprano ascends the scale, the bass usually descends it, and *vice versa:*



Laban: Lowell Mason.

As for the individual measures, all that was said of those of poetry applies also to these. In fact, throughout all their manifestations, the arts possessing forms that move, show scarcely less tendency to balance regularly from one extreme to another than does a man when he moves in walking.

CHAPTER V.

PRINCIPALITY, SUBORDINATION, AND COMPLEMENT OR BALANCE IN PAINTING, SCULPTURE, AND ARCHITECTURE.

General Illustrations of the Effects of the Three Methods—Principality by Size, Position, Direction of Lines, Color, and Shading—Illustrations—In Sculpture—In Architecture, through a Porch, Door, Window, Dome, Spire, etc.—Vertical and Horizontal Balance—Complement between Principal and Subordinate Features—Between the Subordinate, with the Principal Separating them—Groupings of Odd and of Even Numbers—Complement and Balance in Painting—In Sculpture—In Architecture—Approaching Symmetry in Large Public Buildings which Demand Effects of Dignity—Principality and Complement in Modern Public Buildings—Criticisms—Suggestions—Even and Odd Numbers in the Horizontal and Vertical Arrangements of Architecture.

THE importance and relationship of *principality*, *subordination*, and *balance* or *complement* are much more apparent in the arts of sight than in those of sound. Ruskin, in his "Elements of Drawing," Letter III., illustrates these effects, although he applies what he says only to principality, by drawing certain groups of leaves.

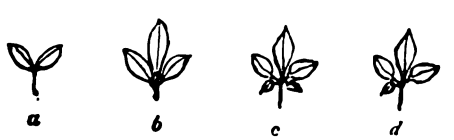


FIG. 13.

"*a*," he says, "is unsatisfactory, because it has no leading leaf; *b* is prettier, because it has a head- or master-

leaf; and *c* more satisfactory still, because the subordination of the other members to this head-leaf is made more manifest by their gradual loss of size as they fall back from it." To this may be added a fourth figure, *d*, with the declaration that it is unsatisfactory because it contains nothing to complement or balance the lower leaf.

Sometimes, in art, the principal object is brought into prominence by being made larger than the subordinate objects. This was the old Egyptian method. According to Miss Edwards, in her "Thousand Miles up the Nile," in the pictures still remaining in the tomb of Ti, near the site of ancient Memphis, the figures of the principal character are, in all cases, about eight times as large as those of the servants represented as at work around him. Of the same nature is the representation in this Fig. 14,

FIG. 14.—PIANKLI RECEIVING THE SUBMISSION OF NAMRUT AND OTHERS.

See pages 70, 189.

of "Piankli, Monarch of Napata, Receiving the Submission of Namrut, the Hermopolitan King." This king is depicted in the small figure in the upper line at the right as leading a horse with one hand, and holding in the other a sistrum, which it was customary to carry when approaching a god. In the line below, those who have

FIG. 15.—HENRY II. RECEIVES FROM GOD THE CROWN, HOLY LANCE, AND IMPERIAL SWORD. (FROM "HENRY'S MISSAL.")

See pages 72, 189.

been conquered are depicted in a more slavish attitude. An effect of a similar kind is produced at the expense of making the divine being himself subordinate, in Fig. 15, page 71, taken from the German "Henry's Missal." Sometimes, as in some of the "Madonnas" of the old masters, the principal figure, though no larger in itself, is made to have a larger effect by being elevated on a throne or in clouds. See the "Madonna" by Fra Bartolommeo, Fig. 58, page 185, also Raphael's "Transfiguration," Fig. 46, page 147. Sometimes this figure is in the foreground, as the gladiator in Gérôme's "Pollice Verso," Fig. 26, page 81, or as the central character in Raphael's "Ananias," Fig. 94, page 288. Sometimes, in connection with these other methods, the leading outlines of pictures are made to radiate from the chief figure, as from the Christ in the air, in Raphael's tapestry of the "Conversion of St. Paul"; or from the gladiator in Gérôme's "Pollice Verso," Fig. 26, page 81; or from the Desdemona in Becker's "Othello," Fig. 55, page 181. Sometimes a figure is made most prominent by a use of color, as by red drapery given to the Christ in Titian's "Scourging of Christ"; and sometimes by a use of light and shade, the former being concentrated where it will necessarily attract attention.

In Rubens' "Descent from the Cross," Fig. 16, page 73, a white sheet, the whitest object in the picture, is placed behind the form of the Christ. In Correggio's "Holy Night," Fig. 70, page 215, all the brightness in the picture is reflected from that which illumines the face of the infant Jesus. It is needless to say at what the spectator looks first when viewing these works. He at once recognizes the principality of the form about which all the light is massed. They are admirable instances, therefore, of how the most successful results of both *principality*

FIG. 16.—DESCENT FROM THE CROSS.—PETER PAUL RUBENS.

See pages 16, 72, 80, 144, 190, 214, 235, 257.

FIG. 17.—STATUE OF LEDA, AT FLORENCE.
See pages 74, 85, 179, 289.

When, either in painting or sculpture, the whole work contains but a single figure, the relative prominence of merely different parts of this, must show the influence of these methods.

"The Leda," from the statue at

and *massing*, to be considered presently, can be secured when the two operate conjointly.

In sculpture the methods under consideration are equally prevalent and effective. When there are many figures, the same principles apply as in painting, excepting, of course, cases where there is color. See the relief, now in the Louvre, entitled "Mithras Stabbing the Bull," Fig. 54, page 179.

FIG. 18.—STATUE OF TITUS, IN THE LOUVRE.
See pages 75, 85, 120, 180, 289.

Florence, Fig. 17, page 74, with the hand before the breast, about which also all the outlines of the unresisting form seem to centre, gives principality to the heart, the seat of the affections. The erect head on the thick neck and broad shoulders of the "Titus" in the Louvre, Fig. 18, page 74, in connection with the commanding gesture, gives principality to these, the seat of the directing power, or of authority. The equally erect but more buoyant figure of the "Diana" of the Louvre, as she speeds to the chase, Fig. 19, gives principality to the mental purpose subordinating to itself every tendency to mental weariness. The "Mercury," found at Herculaneum, Fig. 20, page 76, with head bending toward the trunk and limbs, shows the mind subordinated, but, owing to his evident reluctance, only temporarily subordinated to the bodily condition. In a different way, because devoid of any suggestions of mental opposition, the positions of "The Wrestlers," Fig. 21, page 77, make everything subordinate to lower physical strength.

FIG. 19.—DIANA, FROM THE LOUVRE.
See pages 75, 85, 120, 186.

In architecture, principality is attained by making prominent a porch or door, Fig. 1, page 15, indicating per-

haps the numbers, great or small, expected to enter it; or a window, Fig. 22, page 78, or dome, Fig. 42, page 123, indicating the amplitude or height of the interior halls; or a spire, Fig. 68, page 207, indicating an intent to attract

FIG. 20.—MERCURY.—BRONZE FROM HERCULANEUM.
See pages 75, 85, 120.

attention from a distance. Sometimes all these features together are emphasized by being all made to constitute parts of one principal tower, Fig. 71, page 218. The impression of completeness that many people derive from

buildings like the Oriental mosques, Fig. 3, page 19, Fig. 31, page 88, Fig. 42, page 123, or "St. Peter's" at Rome, Fig. 23, page 78, is owing undoubtedly to the fact that the dome used in them as a principal feature is especially effective in subordinating to itself all the other forms, and giving to the buildings as wholes an appearance of unity. In many structures extending into wings that equal or

FIG. 21.—THE WRESTLERS.
See pages 75, 85.

surpass in size their central connecting parts, Fig. 24, page 79; or containing large numbers of openings, gables, turrets, domes, or spires equivalent in effect, Fig. 72, page 221, no such impression is produced. Nor, for reasons to be given farther on in this chapter, can one claim that in villas, such as are represented in these figures, this impression always should be produced. In neither building is any special dignity of treatment demanded. Be-

FIG. 22.—HOUSES OF PARLIAMENT, FROM OLD PALACE YARD.
See page 76.

may not be able to explain why its appearance is unsatisfactory.

Passing now to *complement* and *balance* in the arts of sight, we had better start with their most elementary manifestations. There are two ways of placing two objects together in space. The one may be partly or wholly under the sides this, we have in Fig. 24, page 79, a twin effect allowable in a building of such a character, and in both it and Fig. 72, page 221, an effect of *interspersion*, to be considered in Chapter XIV. But, while these statements are true, it remains a fact that any lack of principality in any building appears to some to be a defect, although, as is often the case in such matters, they

FIG. 23.—ST. PETER'S, ROME.
See pages 18, 77, 87, 96, 124, 186, 207, 265.

other, or the two may be side by side. In the former case, they seem to fulfil the requirements of balance, or to have equilibrium, whenever the lower object appears larger and therefore stronger than the upper, —a condition which we have all seen carried out in the increased size given to the base of a monument. See statues in Fig. 41, page 121. But in the latter case, when the two are side by side, balance seems to be preserved, notwithstanding a reasonable degree of difference in their relative sizes, whenever they appear to be exactly upon

FIG. 24.—A TWIN VILLA.
See pages 77, 78, 79, 123, 124, 187.

the same level horizontally, as they would be if floating in the water, lodged on the ground, or suspended, when of equal weight, in scales.

Sometimes two factors thus balanced include all that an art-form contains; and this, of itself, is often satisfactory without any principality. In fact, in such cases, we may say, perhaps, that the twin effect itself has principality. Notice the "Investiture of a Bishop by a King," from the codex in St. Omer, Fig. 25, page 80; "The Twin Villa," above, and the "Gate of Serrano, Valencia,"

Fig. 11, page 47. There are ways, however, in which, even where there are but two factors, one of these can be made principal, and the other subordinate as well as complementary. If they be the figures of two persons, one can be tall, or elevated, or standing, while the other is short, or sitting, or lying down (see the gladiator and

FIG. 25.—INVESTITURE OF A BISHOP BY A KING.
(FROM A CODEX IN ST. OMER.)
See pages 48, 79.

his antagonist in Gérôme's "Pollice Verso," Fig. 26, page 81,) or one can be in the light, and the other in the shade. See, again, Fig. 16, page 73, and Fig. 70, page 215.

If, in addition to the two, the form contain an odd feature, the two can continue to seem to balance, in case the odd be placed between them. In fact, this

FIG. 26.—POLLICE VERSO, BY GÉRÔME.

See pages 16, 30, 72, 80, 82, 144, 172, 179, 182, 186, 217, 239, 257.

arrangement augments the effect of balancing, by that which, as we shall presently find, is the main characteristic of *symmetry;* for, so placed, the odd feature acts like an intersecting line, clearly showing—as the body does between the wings of a bird, or the head between the shoulders, or the nose between the eyes—just how the pairs are separated and related.

The same is true of groups, too, formed of five and seven, or of any other odd, rather than even numbers. Only when there are sufficient factors to make it difficult to count them in a single glance, is it as easy to secure effects of balance with the latter as with the former (see Turner's "Decline of Carthage," Fig. 51, page 175). When there are many figures, as in the one hundred and sixty of the size of life in Paul Veronese's "Marriage at Cana," or in the two hundred and ten, thirty of which are of full length, in Tintoretto's "Paradise," there is usually a principal group containing a principal figure, and many subordinate and complementary groups, each, at times, containing its own principal figure. Of course, the groups thus formed are usually arranged as if they were only individual factors. Notice the grouping in Raphael's "Transfiguration," Fig. 46, page 147, and in Teniers' "Village Dance," Fig. 43, page 143.

The numbers of ways in which effects of *balance* may be secured in these visible arts, especially in painting, seem practically infinite. As a method, too, it is almost universal. In Gérôme's "Pollice Verso," Fig. 26, page 81, a gladiator's limbs stretched upon the ground on one side of his triumphant antagonist is exactly balanced by the armor that has been stripped from them, which lies on the other side of the victor; while the arm of the latter, lifted that his sword may strike, is balanced by his victim's arm

lifted to appeal for mercy. In the first case, we have an instance of balance produced in spite of decided contrast between the balancing members. A similar effect is produced by color in one of Paul Veronese's pictures of the

FIG. 27.—THE DISCOBOLUS, OR QUOIT THROWER.
See page 85.

"Marriage at Cana," where a small black head of a dog on one side is said to balance a large mass of black on the other side. So, too, in Jules Breton's "Brittany Washerwomen," formerly in the New York Metropolitan Museum.

a little blue in the women's skirts balances a much larger amount of blue in the sea opposite to them.

As exemplified in the human figure, and so in sculpture, *balance* can never be fully understood, except as it is treated in connection with both *symmetry* and *proportion.* Here it is sufficient to point out that, as a rule, in order to secure variety, the limbs of the two sides of the body should be in somewhat different positions. If this arrangement be adopted, nature requires that a man should keep his equilibrium, and art that he should seem to keep it by

FIG. 28.—A SMALL HOUSE.
See pages 85, 96, 124, 187.

making an exertion in one direction sufficient to counteract that made in the other. For this reason, when one is gesturing, or appearing to gesture, his hands and head, if the latter be not kept still, should make counteracting movements. The head should move toward the hands when they are lifted, and away from them when they fall. Or if he be posing, and his arm be thrust out on one side of him, his other arm, or his trunk or foot should be thrust out on his other side, sufficiently at least to secure an effect of equilibrium. The necessity in art of seeming

to carry out such requirements, especially where postures are unusual, as in the case of the "Discobolus," (Fig. 27, page 83) presents one of the greatest difficulties which the sculptor has to encounter. See statues on page 74 to 77.

FIG. 29.—PALACE OF JUSTICE, AT LYONS, FRANCE.
See pages 87, 96, 261.

In architecture, it is possible for one subordinate feature to complement the principal, as a wing, or porch, or door at one side of a house balances the whole façade of the building to which it is attached (Fig. 28, page 84); or as

FIG. 30.—SULEYMANIYA MOSQUE, 1556.

See page 90.

a tower at one side or corner offsets the body of a church (Fig. 97, page 292); or as a dome completes that which supports it (Fig. 23, page 78). With exception of the dome, however, such arrangements are in place mainly in smaller buildings in which graceful and picturesque effects are desirable. In all such cases, too, it is important that the *subordinate* feature be sufficiently large to be a true *complement* or *balance*. A wing, or tower, or dome of any kind, too small for that which goes beside or beneath it, is invariably unsatisfactory. Notice the absence of effectiveness for both these reasons in the cupola surmounting the unnecessary mixture of styles in the "Palace of Justice," at Lyons, France, Fig. 29, page 85.

In the degree in which a building, like a church, a court-house, or a school, is to be devoted to a serious purpose, it should convey an impression of dignity. In art, as in life, this effect results from an appearance of perfect equilibrium. In architecture it is secured in the degree in which the principal entrance is exactly in the middle of the façade, with an equal number of subordinate features, towers, pillars or openings, as the case may be, on either side of it. Notice, as exemplifying this arrangement, "Cologne Cathedral," Fig. 2, page 17, the "Taj Mahal," Fig. 3, page 19, "St. Mark's, Venice," Fig. 31, page 88, and "The Gate of Serrano," Fig. 11, page 47. In the Greek temples, the front peristyle—to which, as a whole, was given principality—always contained an even number of columns, in order that, before the central door, there might be a central space between them. This space, too, was wider than that between the other columns, and the spaces between the columns farthest to right and left were narrower than those between any others. Thus, in the principal feature considered in itself, the Greeks

FIG. 31.—CHURCH OF ST. MARK, VENICE, WITH CAMPANILE.

See pages 18, 77, 87, 90, 96, 124, 180, 186, 190, 207, 261, 262.

secured the effect of symmetry through that of principality with balance. See "Temples of the Acropolis," Fig. 1, page 15.

Our own architects have wisely ceased to imitate the Greeks in cases where to do so would be out of place; but the principle of imitation has had, and continues to

FIG. 32.—CANTERBURY CATHEDRAL, FROM SOUTHWEST.
See pages 18, 77, 90, 124, 207, 261.

have, such an influence, that, as applied to the Gothic, we still cling to methods that represent not its best, but its worst phases. The tower at one corner, or at the side, which is so common with us, is an inartistic adaptation of what had a very different effect when separated from the church in the structure called a campanile (See an Ori-

ental example of this in Fig. 30, page 86, and a more familiar one in Fig. 31, page 88). Nor can a huge tower or towers placed at the front (see Fig. 2, page 17) fulfil at all the same office as those much smaller in proportion which are kept subordinate to a tower or dome at the centre (see Fig. 32, page 89). There is no doubt that the ideal building is represented not in Fig. 2, page 17, but by the way in which principality, subordinateness,

FIG. 33.—IFFLEY CHURCH.
See pages 92, 124.

and complement are all given their due proportionment, as in Fig. 32, page 89.

Besides imitation, the desire to have a building present an impressive appearance on the street is accountable for this accumulation of the chief features on one side or corner. But many of these buildings are on two streets; and the demands of the ordinary American church are so different from those of the European that it is strange that our architects, in the arrangements both of exteriors and

FIG. 34.—SHADYSIDE PRESBYTERIAN CHURCH.—(Shepley, Rutan, and Coolidge, Architects.)

See pages 92, 96, 124, 186, 190.

interiors, have not been forced into more originality. There are undoubtedly good reasons why that which, artistically considered, is the most satisfactory form of the cathedral and parish church, Fig. 33, page 90, should not be adopted by us. Such a building is difficult to construct; and, when constructed, the huge foundations of the tower interfere with both hearing and seeing. Yet an adaptation of the form to modern purposes, as well as an artistic building in all regards, seems to be furnished, so far as one can judge from a photograph, in the "Shadyside Presbyterian Church," Fig. 34, page 91.

As a rule, however, an American church has two separate parts—one devoted to worship, and the other, mainly, to the Sunday schools. In some cases, with admirable effect, a tower has been placed between these parts. But the idea thus given form could be further developed, and the building as a whole made more distinctly a unity. The tower could be back from the street, and in the centre of the structure; and under it could be not only the central entrance, but an entrance-hall as long as the building's width, broad, lofty, and imposing, and filled, as time passed on, with memorials. The main audience-hall, too, if architects and those who employ them would only subordinate their traditional notions to the dictates of taste and reason, could be made much more original and artistic, as well as convenient and practical. See Fig. 35, page 93, and Fig. 36, page 94, the work of Mr. G. H. Edbrooke, of New York.

The same statements apply, of course, to schools and all kinds of public edifices. It is remarkable, by the way, that those who have planned modern cathedrals have not recognized the propriety of placing the central tower

FIG. 35.—PLAN FOR A CHURCH.—EXTERIOR.

See page 92.

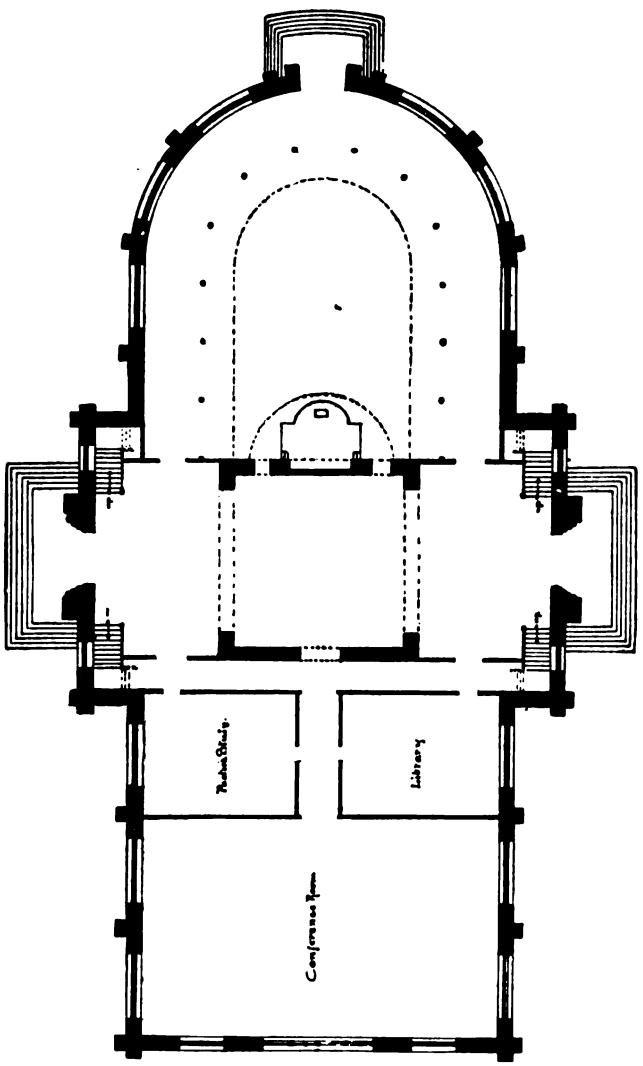


FIG. 36.—GROUND PLAN FOR SAME CHURCH.

See page 92.

entirely over the nave, instead of at the juncture of the nave and transepts. In the former place, the tower could be narrow enough to prevent any structural weakness owing to a reach of arches under it, and, if it were there, it would be possible to have in front of the chancel, in connection with all the traditional effects of nave and aisles and chancel, a large audience-hall, flanked, if necessary, by wide transept galleries, in which the crowds in attendance could not only hear but see the services. As such a hall is acknowledged to be almost essential to a modern church of any kind, one would suppose that the first effort of architects would be in the direction of a design in which it could be embodied without difficulty. Notice Fig. 37.

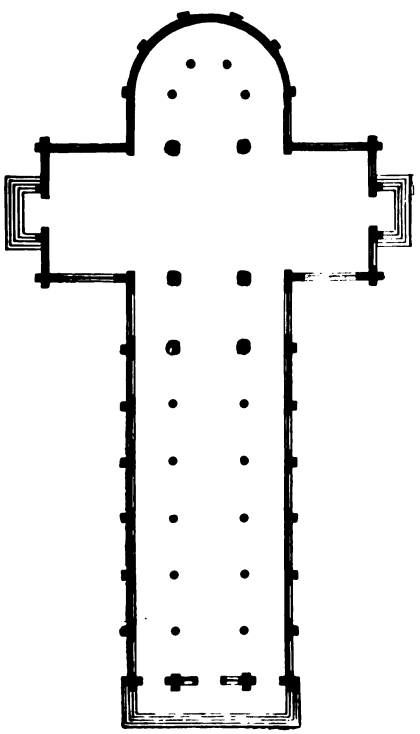


FIG. 37.—GROUND PLAN FOR A CATHEDRAL.

Before leaving this subject, it may be well to add that what has been said of the method of emphasizing both principality and complement through the use of uneven

rather than of even numbers, may apply to perpendicular as well as to horizontal arrangements. To one looking upward at a building, for instance, the basement often seems to complement the roof, or a first story to complement a third; while the principal part, or, at least, the pivot-line of balance, seems to be between them. It is worth noticing in this connection, too, that the Greeks, according to all testimony, almost invariably grouped different architectural features, whether placed perpendicularly or horizontally, according to proportions determined by odd numbers, 1, 3, 5, 7, etc.; and also the fact, which our own experience has probably confirmed, that the majority of men feel that a house or tower having an equal number of openings or divisions of spaces either horizontally or perpendicularly—say exactly two or four windows on a story, or two or four stories with no apparent basement or roof—is less pleasing than a house having three or five windows on a story, or having one and one half, two and one half, or three or five stories, or four stories with an apparent roof. See Figs. 3, page 19; 11, page 47; 23, page 78; 28, page 84; 29, page 85; 31, page 88; 34, page 91; 42, page 123, etc.

CHAPTER VI.

GROUPING AND ORGANIC FORM IN POETRY AND MUSIC.

The Principle of Grouping, Resulting from the Requirements of the Product—The Method, Conditioned by this Principle, Organizes the Group—Organism in Nature and in Classification—In Art-Composition—Organism in the Art-Product: the Feet, Trunk, and Head of Plato; the Beginning, Middle, and End of Aristotle—Applied to Poetic Form—To the Sentence—To the Poem—Effects of Form Due to the Organic Order in which the Beginning, Middle, and End of Movement are Presented: Stedman—Where Thought is Didactic: Longfellow—Pope—Montgomery—In a Simile; Howitt—Waller—Hugo—Same Effects as Produced by Form Irrespective of the Thought—Sherman—Waddington—Miller—Gosse—Scollard—A Like Principle Illustrated in Plots of Long Poems—In Music—A Periodic Form—Explanations of the Effect in Short and Long Compositions—In Reiterated Chords at their Beginning and Close—Same Principle in Oratory.

IT has been shown that in classification and art-composition, the conditions of mind and nature involve a regard for the principles of *unity*, *variety*, *complexity*, *order*, *confusion*, and *counteraction*; also, that there needs to be that combined application of all of these, as conditioned by the requirements of the product, which is termed *grouping*. Certain methods, respectively owing their origin to the first six of these principles, have been said to be *comparison*, *contrast*, *complement*, *principality*, *subordination*, and *balance*. The method connected in a like manner with *grouping* needs now to be considered.

Factors ought to be grouped in such a way as to cause

them to show more than the mere existence of *principality, subordination*, or *balance*. They ought to show their relationships to each other and to the class as a whole of which they are members. It is in fulfilment of such a purpose that classes are divided as in species and families, and their factors arranged according to their degrees of likeness or unlikeness to the typical form, those unlike it and like others of another class being placed, as it were, at the extremities of their own class, serving thus to define its limits. In this way among the mammals, for instance, the bat may be placed nearest the birds, and the seal nearest the fishes. A like process applied not to one class, but to all the classes that can be included in a given consideration of a subject, leads to what we call a system of classification; and the way in which we ordinarily express the fact, that all the factors possible to a class and all the classes possible to a system have been comprehended in the result, is to say that each and every thing has been thoroughly organized. We might also express the same by saying that to the whole has been given *organism* or *organic form*.

In nature an organic as distinguished from an inorganic form is one of greater or lesser degrees of complexity, pervaded everywhere by channels or organs through which flow effects that influence every part of the object, but of it only, beyond the reach of which effects it ceases to exist. Trees and animals, for instance, with their various circulatory systems, are organic. Sand and clay are not. The method which we are now considering causes the result to show, just as organism does in natural forms, exactly the effect that every part has in enhancing the effect of every other part, and of the whole, as well as in rendering the whole complete.

If organic form, as thus explained, is necessary in classification, it is still more necessary in art-composition. Predominating *comparison* may reveal the fact that the features are all parts of a *unity;* and *principality*, *subordination*, and *balance* may enhance the appearance of this by their influence in the direction of *order;* but only when the parts have been *organically* connected can there be no doubt that each of them belongs with each and all of the others, and just what are the limits of the whole.

From the use of the term organic as applied to forms of nature, it follows that to say that those of art should have organism is the same as to say that they should be characterized by effects analogous to those produced by the living forms of life about us. When we have said this, can there be a more simple yet efficient way of showing how an art-form can come to have these effects, than by showing how the living forms of nature come to have them? Certainly not. It is only natural, therefore, though the reason for it has never been thus explained, that almost all critics of all ages have felt it to be appropriate to take an animal or a man, the highest type of an organized being, as an ideal natural form from which to derive suggestions with reference to the essential characteristics of an ideal art-form. Plato, for instance, named head, trunk, and feet as the three essential features in every work of art; and Aristotle, recalling the fact that all products do not appeal to the eye, and cannot seem to have visible bodies, tried to state a principle more general in its reach by declaring that they must all have beginning, middle, and end. But both statements are virtually the same, and together are inclusive of all possible artistic applications of the subject. The first applies literally to forms that appear in space, the second to those that appear in time. Both mean that

there should be such an order in the arrangement of the parts constituting the form as to cause all the parts to seem to be organically connected with one whole, and this whole to seem to possess all the parts necessary to render it complete.

Let us see, first, how this principle applies to poetry. Some have difficulty in understanding what is meant even by the term *form*, to say nothing of *organism* of form, when used with reference to arts that do not occupy space, and therefore can have no visibly definite shape. To remove this difficulty, a short explanation seems to be needed here, even at the expense of repeating what was expressed more fully in Chapter xxvii. of "Poetry as a Representative Art." We say that a visible object has form in the degree in which it appears to be one object, by which we mean, in the degree in which, owing to effects of outlines, colors, or some other features, every part of the object seems to be connected with every other part of it throughout the entire extent of space which it occupies. A poem is not visible in space, but is apprehended in time, being composed of words that follow one another. Its form is a phase of movement; and, if we apply to it the same criterions as those usually applied to visible objects, changing only the terms that are necessary in order to refer to it as an object whose form is a phase of movement, we may say that it appears to be one form in the degree in which it appears to be one movement; by which we mean in the degree in which every part of its movement seems to be connected with every other part of it, and this throughout the whole extent of time which it occupies.

In a perfect sentence, which, by way of illustration, we might conceive to be long enough to constitute an

entire poem, every word or clause is related in some way to every other; and is related also in some way to a *subject* which represents the beginning of a movement; to a *predicate* which represents the continuation and sometimes the end of the movement; and also, when needed, to an *object* which represents the end of the movement. It is for these reasons that a perfect sentence seems to have form.

If this be true of a sentence, which is a series of words representing thought, why should it not be true of a poem, which is also a series of words representing thought? If a poem as a whole is to have form, and one that can be readily recognized, its different sentences, or representations of special and sometimes deviating movements, must all manifest their relationships to each other, and also to the general forward movement.

To express the same somewhat differently, a poem is a development of language, and language is a representation of thought, and thought always involves motion. A poem, therefore, is a representation of thought and also of motion, or, rather, of thought in motion. But more than this, it is a single art-product; therefore it must represent a single thought in a single motion. This implies, first, one thought to which all the other thoughts of the work must be related by way of complement, or subordinated by way of principality; and second, one motion of thought—*i. e.*, one thought moving in one direction, having one *beginning* from which all the movements of all the related and subordinated thoughts of the entire poem start; a *middle* through which they all flow; and an *end* toward which they all tend. This is the same as to say that the *principal*, *subordinate*, and *complementary*, or *balancing* thoughts must all be grouped and presented in organic order. A poem in which these requirements are

lfilled and—let it be carefully noted—apparently ful-led, necessarily produces upon us the impression of *ganism.* Notice a fine illustration of it in the following, d how much it has to do with the general effect. All e actions in the poem from beginning to end are clearly nnected with the whole, and are invariably related in e order in which, in the supposed circumstances, they uld have occurred.

Our good steeds snuff the evening air,
  Our pulses with their purpose tingle ;
The foeman's fires are twinkling there ;
  He leaps when our sabres jingle !
    Halt !
Each carbine sends its whizzing ball ;
Now cling ! clang ! Forward all
    Into the fight !

end of movement, would be didactic in the worst sense; and yet through the use, in the successive stanzas, of the words *death*, *grave*, and *eternity*, indicative as they are of the order of sequence of the different events connected with the departure of the soul from the world, the poet, by giving organic form to the whole, has made it distinctly artistic:

Take them, O Death, and bear away
  Whatever thou can'st call thine own!
Thine image stamped upon this clay,
  Doth give thee that, but that alone!

Take them, O Grave! and let them lie
  Folded upon thy narrow shelves,
As garments by the soul laid by,
  And precious only to ourselves!

Take them, O great Eternity!
  Our little life is but a gust
That bends the branches of thy tree,
  And trails its blossoms in the dust!

—*Take Them, O Death: Longfellow.*

In the following, the representation is not of actions, but of thoughts; yet these two are grouped with strict fidelity to the order in which they would reveal themselves to the one supposed to experience them. Notice here, too, how the apparent organism of the form enhances the effect. Would the poem have any effect at all, in fact, if it were not for this?

Vital spark of heavenly flame,
Quit, O quit this mortal frame!
Trembling, hoping, lingering, flying,
O the pain, the bliss, of dying!
Cease, fond Nature, cease thy strife,
And let me languish into life.

Hark they whisper; angels say
Sister spirit, come away.
What is this absorbs me quite,
Steals my senses, shuts my sight,
Drowns my spirit, draws my breath?
Tell me, my soul, can this be death?

The world recedes; it disappears;
Heaven opens on my eyes; my ears
With sounds seraphic ring.
Lend, lend your wings, I mount, I fly.
O Grave, where is thy victory?
O Death where is thy sting?
—*Address of the Dying Christian to his Soul: Pope.*

A similar result appears in these two successive stanzas:

Night is the time for rest;
How sweet, when labors close,
To gather round an aching breast
The curtain of repose,
Stretch the tired limbs, and lay the head
Upon our own delightful bed!

Night is the time for dreams;
The gay romance of life,
Where truth that is and truth that seems
Blend in fantastic strife;
Ah, visions less beguiling far
Than waking dreams by daylight are.
—*Night: James Montgomery.*

If a simile be introduced, the same principle applies both to the figure and to the thought illustrated by it, *e. g.:*

And is the swallow gone?
Who beheld it?
Which way sailed it?
Farewell bade it none?

No mortal saw it go ;—
  But who doth hear
  Its summer cheer
As it flitteth to and fro ?

So the proud spirit flies !
  From its surrounding clay
  It steals away
Like the swallow from the skies.

Whither ? Wherefore does it go ?
  'T is all unknown ;
  We feel alone
That a void is left below.
—Departure of the Swallow : Wm. Howitt.

Here are other poems with the same characteristics :

  Go, lovely rose !
Tell her that wastes her time and me,
  That now she knows,
When I resemble her to thee,
How sweet and fair she seems to be.

  Tell her that 's young
And shuns to have her graces spied,
  That hadst thou sprung
In deserts where no men abide,
Thou must have uncommended died.

  Small is the worth
Of beauty from the light retired :
  Bid her come forth,
Suffer herself to be desired,
And not blush so to be admired.

  Then die ! that she
The common fate of all things rare
  May read in thee :
How shall a part of time they share
That are so wondrous sweet and fair.
—Go, Lovely Rose : E. Waller.

Oh, when I sleep come near my resting-place,
As Laura came to bless her poet's heart,
And let thy breath in passing touch my face—
At once a space
My lips will part.

And on my brow where too long weighed supreme
A vision—haply sped now—black as night,
Let thy look as a star arise and beam—
At once my dream
Will seem of light.

Then press my lips, where plays a flame of bliss—
A pure and holy love—light—and forsake
The angel for the woman in a kiss—
At once I wiss,
My soul will wake.

—Come When I Sleep: Victor Hugo; tr. by W. W. Tomlinson.

Sitting in a porchway cool,
Fades the ruddy sunlight fast,
Twilight hastens on to rule—
Working hours are wellnigh past.

Shadows shoot across the lands;
But one sower lingers still,
Old in rags, he patient stands,—
Looking on I feel a thrill.

Black and high his silhouette
Dominates the furrows deep.
Now to sow the task is set,
Soon shall come the time to reap.

Marches he along the plain,
To and fro, and scatters wide
From his hands the precious grain.
Moody, I, to see him stride.

Darkness deepens. Gone the light.
Now his gestures to mine eyes
Are august; and strange—his height
Seems to touch the starry skies.

—The Sower: Idem.; tr. by Toru Dutt.

Notice also, as criticised in Chapter xxvii. of "Poetry as a Representative Art," Tennyson's "Farewell," "Home They Brought the Warrior Dead," "As through the Land at Eve We Went," and "The Deserted House"; Shanly's "Kitty of Coleraine"; Kingsley's "Fishermen," and "O Mary, Go and Call the Cattle Home"; Barateau's "Twenty Years"; Horace Smith's "To Fanny"; Aldrich's "Nocturne"; and Bryant's "Wind and Stream," "Tides," and "Presentiment."

So far we have been considering organic form as something to be determined by the thought to be expressed. It is possible, even in poetry, to produce the same effect through the form alone, irrespective of the thought. Observe in the sonnets quoted on page 165, as also in the following imitations of French forms, the distinct impression conveyed of beginning, middle, and end. This results entirely too from the form, *i. e.*, from the way in which the stanzas and the repeated lines and phrases emphasizing the successive parts of the poems, are arranged.

Awake, awake, O gracious heart,
  There 's some one knocking at the door;
The chilling breezes make him smart;
  His little feet are tired and sore.

Arise, and welcome him before
  Adown his cheeks the big tears start:
  Awake, awake, O gracious heart,
There 's some one knocking at the door.

'T is Cupid come with loving art
  To honor, worship, and implore;
And lest, unwelcomed, he depart
  With all his wise, mysterious lore,
Awake, awake, O gracious heart,
  There 's some one knocking at the door.

—*Valentine: Rondel by Frank Dempster Sherman.*

We know not yet what life shall be,
  What shore beyond earth's shore be set;
What grief awaits us, or what glee,
    We know not yet.

Still, somewhere in sweet converse met,
  Old friends, we say, beyond death's sea
Shall meet and greet us, nor forget

Those days of yore, those years when we
  Were loved and true,—but will death let
Our eyes the longed-for vision see?
    We know not yet.
—Mors et Vita: Rondel by Samuel Waddington.

"Hylas, O Hylas!" crying to the breeze
Through field and forest wandered Hercules,
  Forgetting those who manned the Argo tall,
  Greece and the glorious labors of his thrall,
Yea, e'en that golden prize beyond the seas.

Wild were his words, and wildly echoing these
Back from the looming gloom of cliffs and trees
  Resounded mockingly his eager call,
    "Hylas, O Hylas!"

When Nestor's wisdom, Orpheus' melodies,
And all rewards of earth no more can please,
  How oft we turn and let the tear-drop fall
  For one whose gift of loving was his all,
And cry in anguish, and on bended knees,
    "Hylas, O Hylas!"
—Rondeau: M. M. Miller.

Even the following, though all contained in a single stanza, has the same characteristics:

I saw a snowflake in the air
  When smiling May had decked the year,
And then 't was gone, I knew not where,—
I saw a snowflake in the air,

And thought perchance an angel's prayer
Had fallen from some starry sphere ;
I saw a snowflake in the air
When smiling May had decked the year.
—A Snowflake in May : Triolet by Clinton Scollard.

To what has been said it needs only to be added now—what will readily suggest itself—that this requirement of *organic form*, as manifested by the arrangement of the chief features of an artistic product, differs not whether a poem be short or long. The degree of excellence in its conception is measured by the degree in which it presents an image of the phase of life with which it deals in a distinct form, by which is meant a form in which are preserved the organic relationships of all the parts to each other and to the whole. When, in speaking of a long poem, such as the "Iliad" or "Paradise Lost," "Hamlet," or "Faust," we commend its unity and progress, or the consistency, continuity, and completeness with which certain ideas of which it treats are developed, we mean merely that the poem as a whole presents in distinct organic form a whole image of that which it is designed to present. The difference, therefore, between the ability to produce a long poem and a short one, or what is sometimes the same thing, a great poem and a small one, is simply of the same nature as that which exists between a high and a small order of intellect in other departments,—a difference in the ability to hold the thoughts persistently to a single subject until all its parts have been marshalled into order.

Turning now to music, who has not noticed that a composition in this art appears to have form in the degree alone in which one theme, *i. e.*, one musical movement, is perceived to be begun, developed, and drawn to

a close? The songs which to most of us appear most nearly perfect assume such forms as are found in the "Sehnsucht nach dem Frühlings," page 67, or "Battle Hymn of the Republic," page 199, in both of which the beginning and end are similar, and the middle very often merely a variation, by way of complement, of the same general combination of notes.

Here are the various elements and developments of a periodic form, as given by Marx in his "Theory and Practice of Musical Composition":

	Beginning	Middle	End	
	Repose	Motion	Repose	
	Tonic	Scale	Tonic	
Repose	Motion	Repose	Motion	Repose
Tonic	Tonic Scale	Tonic 8va	Tonic Scale	Tonic
Tonic Mass	Motion	Half Cadence	Motion	Full Cadence
	Repose	Motion	Repose	
	First Part	Second Part	Third Part	
	8 Measures	8 or 16 Meas.	8 Measures	
	Repose	Motion	Repose	

According to these arrangements, as will be noticed, the movement seems to start and stop at the same point —to pass around the whole circumference, as it were, of the phase of feeling to be expressed, furnishing in this regard an exact analogy in time to that arrangement of groups in space which causes certain pictures and statues to seem to have contours like circles or oblongs. When the phase of feeling to be expressed in music is slight and simple in character, the mind has no difficulty in grasping or representing the whole in its completeness. A longer and more complex subject, as treated in an overture or a symphony, presents, of course, more obstacles both to comprehension and composition. Nevertheless,

it too ought to be characterized and manifestly characterized by that order which causes all to seem organic.

The same principle probably furnishes an explanation of the reiterated chords with which overtures and symphonies frequently begin, and almost uniformly end. These chords represent the opening and the closing of movement; and the suggestion is, that no impetus, such as the works containing them profess to express, could be started or stopped without some such successive efforts. At the same time, perhaps a more natural and exact representation of what is intended, is produced where—as, for instance, in Wagner's overture to "Lohengrin"—the *crescendo* is used in the introduction and the *diminuendo* in the finale. In a composition thus arranged, where the intensity of the movement, as regards both time and force, is increased and diminished gradually, do we not have presented a more complete idea of the starting and stopping of movement—at all events, of voluntary movement—than is possible in connection with those methods that seem only to arouse and check it violently? Of course, if the composition be intended to leave a strong impression at its close, forcible chords [illegible] much more often than [illegible] begins with the [illegible] surge of the sea [illegible] been [illegible]

The [illegible] learn a [illegible] this [illegible] sively [illegible] least, it may [illegible] which [illegible]

public speaker, unless in a time of unusual excitement, begins his address with his body at rest, with his tones uttered deliberately, with the pitch of his voice one that is natural to conversation, and with the range of his thoughts not raised much above the level of those of his hearers. In other words, he starts where the audience are, with no more of vehemence, rapidity, or brilliancy than is justified by the condition of thought in their minds at the time. He begins in the plane of ordinary, dignified intercourse, making no statement with which he has not reason to suppose that most of them will agree. But as he advances, his gestures, tones, language, and ideas gradually wax more and more energetic, striking, and original, till he reaches his climax. In the oration, perfect in form, intended to produce a single distinct and definite impression, this final climax, though often preceded by many another of less importance, stands out pre-eminently in advance of them. In it all the man's powers of action and of langauge, and the influence of all his separate arguments that now for the last time are summed up into a unity, seem to be concentrated like rays of light in a focus, and flashed forth for the enlightenment or bewilderment of those before him. But the most artistic oration does not end with the climax. At least, a few sentences and sentiments follow this, through which the action, voice, and ideas of the speaker gradually, gracefully, and sympathetically descend to bear the thoughts of his audience back again to the plane from which they started. That is to say, the artistic oration has an end as well as a beginning and a middle. It is a representation in complete organic form of the whole range of experience natural to discussion, from the time when a subject is first broached in ordinary conversation to the time when, having been

argued fully and in such ways as to produce a single effect, the mind in exhaustion sinks back, once more, to the level of the conversation that suggested it. Whoever had an opportunity of listening to the public addresses of Everett, Beecher, or Gough, possessing, as they did, all these characteristics, will not fail to recognize without further comment how much the effects of oratory owe to the fact of their being grouped in strict accordance with the requirements that are fulfilled in what we have termed *organic form.*

CHAPTER VII.

GROUPING AND ORGANIC FORM IN PAINTING, SCULPTURE, AND ARCHITECTURE.

Places Corresponding to Head, Trunk, and Feet in a Picture—Necessity for Considering them—Different Kinds of Contour—Arches—Semicircles—Pyramids—Circles—Ovals—Wedge-Shapes—Same Effects Produced by Light and Shade and Color, Differing on Different Sides, Above and Below, at the Centre and at the Circumference—Same Effects in Sculpture—The Pedestal or Foot, the Canopy or Head, on Out-Door Statuary—Architecture—The Foot in the Foundation—The Trunk in the Wall—The Head in the Roof—Architectural Grouping as a Whole.

THE most uncultured mind recognizes the superior attractiveness of paintings, statues, or buildings that seem to have "some head and tail,"—an expression through which plain people indicate how well they appreciate, in the arts appealing to sight, the characteristics that Plato designated by the terms head, trunk, and feet. A distinction needs to be drawn, however, between these terms as applied to a picture or statue, and to a figure of a man or animal that is represented in either. If a man, for instance, be represented as standing upright, his head will be at the top of the canvas, his feet at the bottom, and his trunk midway between them; and thus the *organic form* of the picture and of the man will correspond. But if he be represented in a foreshortened figure, plunging toward the spectator, his head may be at the bottom or in the centre of the canvas, and his feet

at its sides or top; and the *organic forms* of the picture and of the man will not correspond. Accordingly, we must not confound the art-characteristics which have been indicated by the words head, trunk, and feet, with the same when applied literally to living objects.

Pictures are made to have the effect of *organic form*, as a result, of course, of *order* in the *grouping;* and for this almost everybody recognizes the necessity. Even in taking a common photograph an inexperienced operator will be careful to arrange a number of persons so as not to have them all sit in a row like the members of a negro minstrel troup. He will almost invariably place the larger or more prominent person or persons in the centre or at the top, thus giving the group a head; and the others on either side or below, thus giving it a trunk and feet; while he will also dispose of the whole party in such a way that the contour of the group, as outlined by all their forms together, shall seem to have some shape—that suggesting a circle, an arch, or a pyramid, as the case may be. The idea of producing these effects by the order in which different factors are grouped, is undoubtedly suggested by the appearances of things in nature, where organic form is a characteristic not only of individual fruits and leaves, but of whole clusters of them; and not only of whole trees, but even of the forests in which they grow. (See the trees in Fig. 47, page 157.)

In paintings perhaps the most common arrangement is one fulfilling the requirements of symmetry also, in which the contour caused by different forms at the top and sides of a picture suggest an arched line described from some centre of radiation below, while the bottom suggests a straight line. Usually, of course, what might be termed the head of the picture is near the apex of the arch, and the trunk

is between that and the straight line which forms the feet. In this case the feet, which represent the foundation on which the whole rests, are made to appear, like the ground that underlies all objects in nature, particularly substantial. Effects of form produced through this method may be seen in the "Ezekiel" of Raphael, the "St. John" of Domenichino, the "St. Michael" of Guido, the "Poetry" of Kaulbach, and the "Transfiguration" of Raphael (Fig. 46, page 147); as well as in numerous landscapes, in which the highest mountains are not at the sides, but usually near the centre of the picture, while the weightiest or darkest objects are at the bottom.

FIG. 38.—LA BELLE JARDINIÈRE.—RAPHAEL.

This arrangement, however, by which the chief outlines at the top of the picture suggest a semicircular arch, and those at the bottom a broad and often a horizontal base, though common, is by no means universal. Sometimes, as in Raphael's "Sistine Madonna," "La Belle Jardinière" (Fig. 38, above), and "Del Passegio," and in innumerable landscapes with mountains in the middle distance, the chief outlines at the tops and

sides suggets the form of a pyramid rather than of an arch.

Sometimes, as in Raphael's "Madonna della Sedia" (Fig. 39, below) and "Casa d'Alba," the chief outlines at the bottom as well as at the top suggest a semicircle, causing the contour of the picture as a whole to seem circular; and sometimes, as in the "Madonna del Impannata" and the famous "Sistine," the pitch of the arch both above and below is sharpened and a distinctly oval effect is produced, which, in the latter, has been described as a diamond.

FIG. 39.—MADONNA DELLA SEDIA.—RAPHAEL.

These arches and pyramids are seldom perfect, the lines of the former being not always exactly rounded, nor of the latter exactly straight; but they are sufficiently regular to suggest the idea of *organic form*, and not only so, but of this produced as a result of design. As the same effect is imparted by almost any approximately symmetrical disposition of parts, artists resort to methods that, at first, would seem to suggest separation rather than unity. Thus a wedge-shape is produced by the outlines of buildings or mountains on one side of a picture which descend and near its middle meet the outlines of other buildings or mountains or forests, with or without buildings, which

descend in a similar way on its other side (see Fig. 51, page 175); or the whole painting is divided into two parts, one containing forests or hills and the other plains, water, or sky (see Fig. 40, page 119).

As has been intimated already, the impression of form in nature, as in a cluster of berries or leaves, is conveyed not only by contour, but also—more or less closely connected with this—by color, especially as subjected to the influence of light and shade. In this way the "Organ Recital" by Henry Lerolle, in the Metropolitan Museum in New York, is diagonally divided into two parts, all the dark colors being at the left lower side of the picture and all the light colors at its right upper side. A somewhat similar arrangement characterizes also both of Corot's paintings that are in this book, namely Fig. 47, page 157 and Fig. 73, page 223.

Almost all great paintings indicate similarly artistic adjustments of color, which necessarily accompany, and often greatly enhance, the effects of form as produced by the contour. Usually, as in external nature, the lighter tints are above, in connection with what has been termed the head of the picture, and the dark and heavier shades below, in connection with what has been termed the foot (see Fig. 46, page 147). But sometimes colors in the body or at the centre of the picture are used almost independently of lines. Just as the play of light and shade upon a surface in nature reveals to us whether it be concave or convex, so the delineation of them upon canvas may cause features to seem to project or retire from the main ground, and thus influence what we may call the shape or form of the whole. This subject of the disposition of light and shade in the body of the canvas touches closely upon what was illustrated in connection with *principality*, and

FIG. 40.—EVENING.—CLAUDE.

See pages 31, 118, 146, 156, 172.

will be further illustrated when we come to *central-point* and *massing*. It suffices to say here that, although the effects produced thus are sometimes, as by Rembrandt, carried so far as to appear unnatural, even then they are worth study. Indeed, if we wish to recognize how much more pleasing, as produced by this method, is an appearance of form in a composition than of formlessness, we can all do this to our entire satisfaction by comparing Correggio's "Holy Night" (Fig. 70, page 215), or Murillo's "Holy Family" with the same subjects as treated by others failing to recognize the value of that which, now and then, these great artists were led to exaggerate.

The effect of organic form is produced in sculpture in the same general way, of course, as in painting. Whether the product contain a single feature or many features, the outlines of what Plato would term its head, like the outlines of a cluster of fruit around its stem, if not actually curved like an arch or tapered like a pyramid, at all events are not without good reason either square or even irregularly acute, and the base or foot is broad and substantial. Examples of this fact are furnished in almost all the classic statues. Notice, for instance, "Mithras Stabbing the Bull" (Fig. 54, page 179), the "Tauro Farnese," "The Laocoön" (Fig. 75, page 226, Canova's "Cupid and Psyche," and, of single features, the "Ganymede" of the Vatican, and the "Fortuna" and "Reposing Faun" of the Capitol; also the Figures on pages 74 to 77.

These single statues, as a rule, have a pillar, or post, or drapery, or something at one side of them to enhance the width of the trunk. All of them, too, whether they be busts or of full length, rest upon a pedestal of dimensions ample enough to present the appearance of sufficient support (see fig. 41, page 121). This pedestal, of course, is the

foot of the statue, considered as a whole When the work that it supports is intended to stand within doors, the pedestal need not seem heavy. But when intended to stand in the open air, it should seem strong enough at least to resist the storms.

FIG. 41.—MARKET OF ATHENS, RESTORED.
See pages 79, 120, 122, 123, 289.

It is a question, indeed, whether, in the latter case, something should not be erected different in some regards from that which is to adorn the salon; it is a question whether, in our own climate especially, the finer products of this

art, representing the human figure, should be left wholly exposed to the adverse influence of the weather. A canopy erected over them, of the same material as themselves, would certainly be appropriate and beautiful. (See the statue in the foreground of Fig. 41, page 121.) Very likely, too, a thoroughly cultivated taste would detect in this arrangement the only possible method of finishing the monument as a whole, in such a way as to give it not only the completeness of form manifested in a foot and trunk, but also in a head.

The necessity of organism is probably recognized more generally in architecture than in any of the other arts. If, for instance, we perceive columns, buttresses, or even *dead walls*, as they are termed, resting on the ground with no base, or foundation of any kind supporting them; or if, with this underneath, we perceive no cornice, freize, entablature, or roof above them, in either case there will be suggested the idea of incompleteness. Our minds require here, as in all the arts, the appearance of a foot, trunk, and head, which in architecture are represented by the foundation, wall, and roof. "The foundation," says Mr. Ruskin in his "Stones of Venice," "is to the wall what the paw is to the animal. It is a long foot, wider than the wall, on which the wall is to stand, and which keeps it from settling into the ground. It is most necessary that this great element of security should be visible to the eye, and therefore made a part of the structure above ground. The eye, taught by the reason, requires some additional preparation or foot for the wall, and the building is felt to be imperfect without it. The body of the wall"—corresponding to what in this essay has been called the trunk —"is of course the principal mass of it, formed of mud

or clay, of brick or stones, of logs or hewn timber." (See Figs. 1, 24, 61, pages 15, 79, 193.)

In addition to foot and trunk, corresponding to foundation and wall, the building must have a head, which, of course, can be represented only by the roof and its accompaniments. As Mr. Ruskin has been quoted with reference to the foundation and wall, he may as well be quoted with reference to the roof. "Has it never occurred to

FIG. 42.—OLD PICTURE OF ST. SOPHIA, CONSTANTINOPLE.
See pages 18, 76, 77, 96, 124, 180, 187, 190, 207, 261, 262.

you," he asks in the first of his "Lectures on Architecture," "what effect the cottage would have upon your feelings if it had no roof? no visible roof, I mean. The very soul of the cottage, the essence and meaning of it are in its roof; it is that mainly wherein consists its shelter, that wherein it differs most completely from a cleft in rocks, or bower in woods. It is in its thick, impenetrable, coverlid, its close thatch, that its whole heart and hospitality are concentrated. Consider the difference in sound of

the expressions 'Beneath my Roof' and 'In my Walls,' and you will quickly see how important a part of the cottage the roof always must be to the mind as well as to the eye, and how, from seeing it, the greater part of our pleasure must continually arise. Now do you suppose that that which is so all important in a cottage can be of small importance in your own dwelling-house? Do you think that by any splendor of architecture—any height of stones—you can atone to the mind for the loss of this aspect of the roof?" (See Figs. 24, page 79; 28, page 84; 32, page 89; 33, page 90; 72, page 221; 85, page 258; and 69, page 208, as well as Fig. 42, page 123.)

Once more the general contour of a building may present effects of grouping similar to those already noticed in painting and sculpture. The various projections, gables, pediments, chimneys, domes, spires, whatever they may be, that make up the wings and roofs, may be arranged so that, taken together, they can be inscribed in a low or a high arch, rounded or sharpened like a pyramid. As a rule, the greater the appearance of the exercise of design in the organic arrangement of these features, the more satisfactory are they to the eye that looks to find in them the results of art. (See the "Taj Mahal," Fig. 3, page 19; "St. Peter's, Rome," Fig. 23, page 78; "Shadyside Church," Fig. 34, page 91; "St. Mark's, Venice," Fig. 31, page 88; "Poutou Temple," Fig. 69, page 208; "St. Hilaire's, Rouen," Fig. 80, page 237; "Tower of Boris, Moscow," Fig. 83, page 279, and "St. Sophia's, Constantinople," Fig. 42, page 123.)

CHAPTER VIII.

OTHER METHODS OF CLASSIFICATION AND COMPOSITION, AS DEDUCED FROM THOSE ALREADY CONSIDERED.

Recapitulation of the Principles and Methods Conditioned upon the Requirements of the Mind—And upon those of Matter—Other Methods Conditioned by the Product are now to be Considered—The Product a Combination of Effects—Produced mainly upon the Mind—Or upon the Senses; or partly upon the Mind and partly upon the Senses—Leading, respectively, to Likeness by Way of Congruity—Of Repetition—And of Consonance—Illustrations of the Three—All the Methods of Composition Result from Combining these Three with the Seven General Methods Mentioned above—Chart of the Art-Methods—Additional Statements—Correspondence between these Methods and their Arrangements and those given by others.

WE have now noticed the more fundamental principles, together with the corresponding methods developed from them, of classification and art-composition. Of the methods mainly conditioned upon the requirements of the mind, three, respectively determined by the more distinctive demands of *mind*, of *matter*, and of a *combination of the two*, are particularly applicable in their relations to *mental conceptions*, namely, *unity*, *variety*, *complexity*. Three more, analogously determined, are particularly applicable in their relations to *material construction*, namely, *order*, *confusion*, and *counteraction*. One more is particularly applicable to the result produced by the blending of the requirements of conception and construction. This is termed *grouping*. Besides these methods,

we have found seven others, mainly based upon the requirements of matter, which respectively correspond to the above in all regards: viz., *comparison*, *contrast*, *complement*, *principality*, *subordination*, *balance*, and *organism*.

These principles and methods are largely theoretical and general in character. From them, to complete our subject, we now need to develop methods more practical and definite. This can be done only as we consider certain conditions determined mainly by the *product*.

This product is a combination of effects resulting from an application to material conditions of the mental principles involved, if in science, in classification; and if in art, in composition. These effects must be estimated, of course, by the mind, and must, therefore, be produced upon it. But they may be said to be produced in strict analogy with the three tendencies already shown to be operative everywhere in connection with this subject *i.e.*, either *mentally*, *materially*, or *in both ways combined;* in other words, either upon *thought*, upon the *senses*, or *partly upon one and partly upon the other*. If the meaning of this statement be shown by applying it to the method based upon the fundamental principle in classification of putting like with like—in other words, to *comparison*—the reader will find no difficulty in applying it to the other methods. Let us see, therefore, how each of these tendencies influences *comparison*. The effect of likeness underlying this method may be produced either, first, upon the *mind*, *i.e.*, upon thought, by way of awakening like associations or suggestions; or, second, upon the *senses*, *i.e.*, upon the ear or eye, by way of the actual appearances of the forms; or, third, upon the *mind and senses together*, *i.e.*, partly upon the one and partly upon the other.

When the effect of likeness is produced upon the *mind*, objects seem alike, because they are seen in the same or a like sphere of place, time, or activity. Men have come to associate them in their ideas; and, by a law of thought, they naturally associate them in reality. In this way, a child or savage always connects the bat with the birds, the seal with the fishes, the sponge with the sea-weeds; and there are no limits to the applications of the method, except those that bound the human imagination. When, because things are seen to go together, it is supposed that they do so in fulfilment of some like, though unapparent, principle, in accordance with which they ought to go together, there is a possibility of finding a reason for associating the most dissimilar objects conceivable.

Not so, however, with those brought together because of having like effects upon the *senses*, or like forms. Examined by this test, it is found that the bat has hair, and the bird feathers; the seal has fur, and the fish scales; and the sponge and sea-weed do not absorb their nutriment in the same way. Therefore they are separated. But this principle, applied exclusively, leads to very small classes, all the members of which must be as like as two terrier dogs or Shetland ponies. To accomplish any practical purpose, classification needs to be more general than this. It needs to be recognized, for instance, that not only is the terrier a dog, but also the hound; and not only so, but that there is a sense in which the wolf also belongs to the same family. This recognition results from an application, in addition to the test of the *senses*, of the test *also of the mind* so far as this is based upon rational rather than merely imaginative grounds. This latter test, applied in conjunction with the former, gives us, as has been said, the third reason for classifying objects. It is partly

because their forms are alike, but partly also because their spheres of time, place, or activity are alike. Animals, for instance, are put into the same class, partly because of similarity in appearance, but partly also because of similarity in such things as their haunts and habits, their ways of breeding and rearing their young, and of feeding and obtaining their food; in fact, of manifesting in connection with their surroundings that which is the law of their existence. Such are the three reasons why objects seem to have like or unlike effects, and all will recognize that there are no possible phases of resemblance to which one of the three may not apply.

In art, the grouping of factors which corresponds to the classification, which results from connecting objects because of like effects produced upon the *mind* by way of association or suggestion, may be termed *congruity* (from *con*, together, and *gruo*, to grow). It means that two things are conceived of as naturally growing or going together; and it may cause them to be connected when in reality they are as unlike as the sounds of a church bell and of an organ, or as the crape of a widow's garb and a white face.

The art-grouping which corresponds to the classification which results from connecting objects because of like effects produced upon the *senses*, in that they are alike in actual appearance, is termed *repetition*. This needs no illustration.

The art-grouping which corresponds to the classification which results from connecting objects because alike to a partial extent in both the regards just mentioned, is termed *consonance*. This word is borrowed from music, and it applies to the conditions which we now wish to represent by it far more exactly than those who first used

it supposed. A consonant tone goes with another in art, not only because men have found the two *going together* in that which, when heard in nature, is termed harmony; but also, as modern science has discovered, because the one tone is in part actually *repetitious* of the other, both being compounded in part of like tones. This, as well as analogous facts with reference to the appropriateness of the term, as applied to the groupings of lines and colors, will be explained hereafter.

It may be well to add here, in illustration of these different methods of likening factors, that *congruity* might cause the artist to associate in a product things as different essentially as rouge on a cheek and blondined hair, or a hunting song and the sound of a horn; that *repetition*, on the contrary, would demand as much likeness as in the allied factors of a piece of fringe, or of a picket-fence, while *consonance*, half-way between the two, would be satisfied were he to unite sounds as different in some regards as those of the flute, the trumpet, the violin, and the drum, or shapes as different in some regards as a chimney and a tower, or a window and a porch. In architecture, a porch or a bay-window on one side of a building, and a wing or hot-house on the other side of it, might be alike by way of *congruity*. Windows and doors of the same sizes and shapes would be alike by way of *repetition;* but merely a similar pitch of angles over windows and doors and in the gables of a roof above them, would be enough to make all alike by way of *consonance*.

There are other analogies, which will be brought out farther on, between the methods of classification and of art-construction; but there is no necessity for considering them here. Let us now leave this phase of our subject and the suggestions to be derived from it, and take the

seven methods, all of which, as has been said, are manifested in the production of a class or of an art-product,—namely, *comparison*, *contrast*, *complement*, *principality*, *subordination*, *balance*, and *organic form*, and combine each of them with each of the methods of causing likeness that has just been mentioned,—namely, *congruity*, *repetition*, and *consonance*. The result, in terms which will be explained more fully hereafter, is given on page 131. It must be borne in mind, however, that, according to the conditions already stated, the methods thus arranged on this page are not supposed to be necessarily exclusive of each other. Those first mentioned are developed into those mentioned later, and therefore include them. *Comparison*, for instance, may be manifested by way either of *congruity*, *repetition*, or *consonance*. But *congruity* also may be manifested by way of *repetition* or *consonance;* and *consonance* by way of *repetition*. The same is true of others of the methods, particularly of those occupying corresponding positions in the different columns.

Duration, *extension*, *accent*, *quality*, *pitch*, *rhythm*, *proportion*, and *harmony* are placed in the last two columns merely in order to complete the analysis, and show its connection with every phase of form. They will not be considered in this volume, mainly because, built up as they are in the effort to carry into execution the other more elementary methods, they require an entirely different mode of treatment.

The terms used in order to define the methods have been chosen from those applying to characteristics generally recognized to be essential to artistic excellence. Ruskin, for instance, in various ways and works, especially in the "Elements of Drawing, Letter III," speaks of principality, repetition, continuity, curvature (considered under

METHODS OF ART-COMPOSITION.

Mainly Conditioned upon the Requirements of the Mind.

Mainly conditioned upon	*Mind.*	*Matter.*	*Mind and Matter.*	*Mind and Matter.*
Mind.	UNITY.	VARIETY.	COMPLEXITY.	GROUPING.
Matter.	ORDER.	CONFUSION.	COUNTERACTION.	

Mainly Conditioned upon the Requirements of Matter.

Mind.	COMPARISON.	CONTRAST.	COMPLEMENT.	ORGANIC FORM.	DURATION IN TIME.	RHYTHM AND PROPORTION.
Matter.	PRINCIPALITY.	SUBORDINATION.	BALANCE.		EXTENSION IN SPACE.	

Mainly Conditioned upon the Requirements of the Product.

Mind.	CONGRUITY.	INCONGRUITY.	COMPREHENSIVENESS.	SYMMETRY.	ACCENT IN STRESS AND LINE.	RHYTHM AND PROPORTION.
"	CENTRAL POINT.	SETTING.	PARALLELISM.			
Matter.	REPETITION.	ALTERATION.	ALTERNATION.	CONTINUITY.	QUALITY AND PITCH IN NOTE AND COLOR.	HARMONY IN NOTE AND COLOR.
"	MASSING.	INTERSPERSION.	COMPLICATION.			
Mind and Matter.	CONSONANCE.	DISSONANCE.	INTERCHANGE.	PROGRESS.		
"	GRADATION.	ABRUPTNESS.	TRANSITION.			

gradation), radiation (central-point), contrast, interchange, consistency or breadth (the same as massing), harmony, help (a form of consonance), and grouping. Charles Blanc again, in the introduction to his "Art in Ornament and Dress," mentions repetition, to which—as he says—belongs consonance, alternation to which belongs contrast, symmetry to which belongs radiation, progression to which belongs gradation, and balanced confusion to which belongs deliberate complication. Of these he adds: "Just as the twenty-six letters of the alphabet have been and will be sufficient to form the words necessary for the expression of all human thought, so certain elements susceptible to combination amongst themselves have sufficed and will suffice to create ornaments whose variety may be multiplied indefinitely." The peculiarity in the list of the methods as here presented, then, aside from the fact that their number is somewhat increased by the addition of features acknowledged to be artistic but not usually mentioned in this connection, is their arrangement and completeness, and their derivation from the methods necessarily employed by the mind in the work of classification.

CHAPTER IX.

CONGRUITY, INCONGRUITY, AND COMPREHENSIVENESS.

The Order of the Arrangement of the Methods in the last Chapter Corresponds to that of the Use of them by the Artist—Who in each Art must Start with a Mental Conception, and the Condition of Mind Underlying Comparison Based upon Congruity—General Effect of this—Incongruity in Nature and Art—Comprehensiveness—Congruity in Poetry—At the Basis of the Law of the Unities—Why the Latter is not Applicable to the Drama — Congruity, Incongruity, and Comprehensiveness in "Hamlet" —In "Lear"—In "Patience"—The same in the Development of Musical Themes—As in the Overture and Opera of "Tannhauser"—Congruity Uniting by Association Different Appearances in the Arts of Sight—Mainly this that Keeps Artists from Using together Forms of Gothic and Greek Architecture—Incongruity and Comprehensiveness in the Arts of Sight—Raphael's "Transfiguration"—Same Methods in Architecture.

THE methods of art-composition not already treated will now be considered in the order in which they are arranged to one reading line by line the list of them given on page 131. It is well to notice, too, that this order is the one in which, as a rule, they are used by the artist. As has been said, he is influenced first by *mental* and then by *material* considerations. He begins with a conception which, in his mind, is associated with certain forms or series of forms. To represent this conception is his primary object. But he cannot attain it, unless the forms, or series of forms, added by him in the process of elaboration, continue to have the same general

effect as those with which he starts. About the latter therefore, as a nucleus, he arranges other like forms according to the general method of *comparison*. Controlled at first chiefly by a desire to have them manifest this, in order to express a like thought, or to be alike by way of *congruity;* afterwards, descending to details, he is careful to make them alike by way of *repetition* and *consonance*. While thus securing *unity* of effect, however, he is confronted by the *variety* and *complexity* of the natural forms from which he is obliged to construct his art-work. But he soon finds that these can be adapted to his purposes through the methods of *contrast* and *complement;* and, when it comes to *grouping*, he is able still to suggest *unity* by fulfilling the requirements of *order*, in spite of *confusion*, through *counteraction* and the arrangement of factors in accordance with methods of *principality*, *subordination*, *balance*, and *organic form*.

Corresponding conditions in the cases also of *congruity*, *repetition*, and *consonance* lead to the use of the methods associated with them. For these reasons, it is evident that the order in which these methods are to be considered here is the order in which, as a rule, they are used by the artist in his practical work of composition.

He begins this work, as has been said, with conceptions which are associated in his mind with certain forms or series of forms; and he develops it artistically by grouping around these other forms that are like them. So long, however, as the thought appears more important than the mode of its expression, all forms to him seem to be symbols; and any of them seem sufficiently alike for the purpose of art if they are alike in what they symbolize. The conditions of nature, moreover, are such that this kind of likeness may be affirmed of many objects

that in other regards differ greatly. There are things like bats and owls, seals and whales, wind and rain, cloud and darkness, that are found so often growing or going together as to be recognized as naturally congruous. Because of this, when seen in nature, they give rise to like suggestions; and, of course, they do the same in art. Nothing further is needed to explain why forms in the latter should be compared and grouped because they have like effects upon the mind, or have what we have termed *congruity*.

As thus interpreted, congruity differs little, if at all, from the familiar rhetorical requirement of propriety; and all that is essential for it is a concurrence, sufficient to suggest unity, in the impressions legitimately conveyed by different parts of a composition as compared either with each other or with the whole.

Effects of congruity thus produced are necessarily accompanied largely by those of *incongruity*. This is partly because so many things that are congruous in what they suggest to thought, are incongruous in what they are in form, and partly because so many things that suggest the congruous to one mind suggest to another, differently disposed or informed, the incongruous. For instance, the sounds of a fife and of a drum compare by way of congruity. Both are elements of the same kind of martial music, the conception of which, therefore, both are alike in suggesting. Again, on the western plains of our country, prairie-dogs and rattlesnakes live in the same sand-holes; and congruity in a picture of the latter would represent the two side by side. But it is evident that there is no reason in their forms why a fife and a drum, a prairie-dog and a rattlesnake, should go together; nor would they suggest a reason to any one not conversant

with the conventionalities of music, or the facts of frontier observation. He would be obliged to consider both combinations incongruous. A similar judgment is certain to be passed by some upon any group of factors, no matter what, whenever they depend for the unity of their effect upon the way in which, as in the case of congruity, they commend themselves to individual taste and experience.

When an art-product contains results both of *comparison* in the *congruous* and of *contrast* in the *incongruous*, yet brought together in such a way that both, though *counteractive*, are clearly perceived to be *complementary* parts of one and the same composition, the impression produced upon thought is that of *comprehensiveness*. This term has been chosen because it involves a conception of diversity both in quantity and quality, and also of grasp which makes of all a unity. *Breadth* might express the same idea, but it already has a technical meaning indicating an effect of composition entirely different from this. (See Chapter XIII.)

Further facts with reference to these methods can be best considered as we notice how they operate as applied in each art. Congruity in poetry is that which causes one, when writing an elegy, a love-song, or an epic, to select in each case not only an entirely different phase of thought and illustration, but a different form of verse. The following lines, for instance, not only enjoin but exemplify this method:

> But when loud surges lash the sounding shore,
> The hoarse rough verse should like the torrent roar.
>
> —*Essay on Criticism: Pope.*

> Soft is the strain when Zephyr gently blows,
> And the smooth stream in smoother numbers flows.
>
> —*Idem.*

When scenes or events represent a certain country or period, *congruity* requires that all the delineations conform strictly to the conditions of each. In connection with the allied method of *consonance*, it underlies, too, the old law of criticism ascribed to the Greeks, enjoining that a drama should contain only as much as might be supposed to take place in the *time* given to the representation, or, at most, in one day, and in one *place*, and with one kind of *action*, by which latter was meant with either tragic or comic situations, but not with both. This "law of the unities" of time, place, and action, as it is called, was based at least upon a true principle. Brevity, local color, and directness are always elements of artistic excellence. It is largely the degree in which these are manifested that imparts the peculiar flavor, the pervasive atmosphere, that seems to be the distinctive characteristic of poems like Goethe's "Hermann und Dorothea," Keats' "St. Agnes' Eve," Goldsmith's "Deserted Village," Campbell's "Gertrude of Wyoming," and Tennyson's "Gardener's Daughter" and "Enoch Arden," not to speak of longer poems like the "Fairy Queen" and the "Idyls of the King."

But, however acceptable this "law of the unities" may have been to the ancient Greeks, who were less interested than people of our day in the analysis of motives and the development of character, it does not allow sufficient *comprehensiveness* for the purposes of modern literary art, least of all of the dramatic. Anything in art is right which enhances an effect legitimate to the product in which it is used. In order to show the results of the influences at work in motives and character, length of time is almost indispensable. So, too, is change of place; while the incongruous association of tragedy and comedy in the action, not only prevents monotony,

t, as universally in the case of contrast, increases the stinctive impression of both. Imaginative people never ve so strong an inclination to laugh as at a funeral, and ars never flow so freely as immediately after a burst of erriment.

In the drama of "Hamlet," for instance, the grave-scene the opening of the fifth act, filled as it is with its grim mor, is to some extent incongruous; yet in view of the ay that Hamlet has made of all the serious matters of e, love, and death, in his dealings with his father's murrers as well as with Ophelia and Laertes, it is evident at the comedy introduced here, while *counteracting*, disctly *complements* the main action of the drama, and us serves to make more *comprehensive* the general conption that organizes it.

What, too, could be more effective than the suggestions

Judicious punishment! 'T was this flesh begot
Those pelican daughters.
Edg. Pillicock sat on pillicock-hill:—
Hallo, hallo, loo, loo.
Fool. This cold night will turn us all to fools and madmen.
Edg. Take heed o' the foul fiend.

—*King Lear*, iii., 4: *Shakespeare.*

And to descend from the sublime to the ridiculous, who that has ever seen and heard the lackadaisical maidens in Gilbert and Sullivan's "Patience," side by side with their robust soldier suitors, can doubt the artistic value of *incongruity?* In fact, as is everywhere acknowledged, it is always one, if not the chief, source of the ludicrous. It is not invariably recognized, however, how large a part of the effect of the latter is owing to the implied *comprehensiveness* of view in which have been included both the *incongruous* and the *congruous;* or, in other words, how large a part of wit is the wisdom of it.

In the following, for instance, it would be difficult to determine which of the two effects is greatest—that of *congruity* caused by the judgments based upon dress, characterizing the estimates of each, or that of *incongruity* caused by the philosophic seriousness with which they are expressed, as well as by the different views indicated in the forms of expression. No better illustration than this, by the way, could be given of *antithesis*, which, as will be recalled, was defined in Chapter II., as an effect produced when two objects differ diametrically in at least one particular, and yet agree in others.

Patience. But I have some news for you. The Thirty-fifth Dragoon Guards have halted in the village, and are even now on their way to this very spot.

Ang. (*contemptuously*). The Thirty-fifth Dragoon Guards!

Saph. They are fleshly men, of full habit.

Ella. We care nothing for Dragoon Guards.

Patience. But, bless me, you were all in love with them a year ago!

Saph. A year ago!

Ang. My poor child, you don't understand these things. A year ago they were very well in our eyes. But since then our tastes have been ethereal-ized, our perceptions exalted. (*To others.*) Come! it is time to lift up our voices in morning carol to our Reginald. Let us to his door.

(*The ladies go off, two and two, singing refrain of*)

Twenty lovesick maidens we,
And we die for love of thee!
Twenty lovesick maidens we,
Lovesick all against our will,
Twenty years hence we shall be
Twenty lovesick maidens still!

(*Enter officers of Dragoon Guards from behind rock, led by* MAJOR. *They march round stage.*)

Chorus of Dragoons.

The soldiers of our Queen
Are linked in friendly tether;
Upon the battle-scene
They fight the foe together.
There every mother's son
Prepared to fight and fall is;
The enemy of one
The enemy of all is:

. . . . . .

Chorus of Ladies.

In a doleful train
Two and two we walk all day:
For we love in vain;
None so sorrowful as they
Who can only sigh and say,
Woe is me, alackaday!

. . . . . .

Col. This is all very well, but you seem to forget that you are engaged to us!

Saph. It can never be. You are not Empyrean. You are not Della Cruscan. You are not even Early English. Oh, be Early English ere it is too late! (*Officers look at each other in astonishment.*)

Jane (*Looking at uniform*). Red and yellow! Primary colors! Oh, South Kensington!

Duke. We did n't design our uniforms, but we don't see how they could be improved.

Jane. No, you would n't. Still, there *is* a cobwebby gray velvet, with a tender bloom like cold gravy, which, made Florentine fourteenth century, trimmed with Venetian leather and Spanish altar-lace, and surmounted with something Japanese—it matters not what—would at least be Early English! —Come, maidens! (*Exeunt ladies, singing refrain of* "In a melancholy train.")

Duke. Gentlemen, this is an insult to the British uniform——

Col. A uniform that has been as successful in the courts of Venus as on the field of Mars!

Song—Colonel.

When I first put this uniform on,
I said as I looked in the glass:
"It 's one to a million
That any civilian
My figure and form will surpass.
Gold lace has a charm for the fair,
And I 've plenty of that and to spare,
While a lover's professions,
When uttered in Hessians,
Are eloquent everywhere."
A fact that I counted upon
When I first put this uniform on!

Chorus of Dragoons.

By a simple coincidence few
Could ever have reckoned upon,
The same thing occurred to me too
When I first put this uniform on!

—*Patience*, i.: *Gilbert.*

The necessity of the methods which we are considering is equally apparent in music too. Every one feels that there is an essential difference, which should be manifest throughout all the parts of a composition, between the effects produced upon thought by a wedding-march, a

funeral dirge, a waltz, and a sonata. But if this fact show the influence of the *congruous*, a very frequent employment of contrasting themes shows, as well, the influence of the *incongruous*.

Who that has heard the earlier composed overture of Wagner's "Tannhauser"—and the same question would apply to the whole opera which this overture represented and epitomized—can fail to recognize either how themes thus contrasted may add to the interest, or how, by the way in which they complement each other, they may augment the *comprehensiveness* of the result? In this overture, a slow choral, representative of the religious element, is at first entirely interrupted by wild contrasting movements, representing the surgings of the passions; then, after a little, it reappears again, gains strength, and finally by main force seems to crush the others down, and in the final strain entirely to dominate them. Here, in the blending of the most intensely spiritual and material of motives, is *incongruity*, and with it a *comprehensiveness* including the widest extremes. Yet how artistically the like features are grouped with like, and each phase of expression made to *complement* the other; and when the two clash, how *principality* gets the better of what would else be *insubordinate*, and reduces all to *order! Incongruity* in such cases really adds to the general effect of *congruity*, because it suggests, as nothing else could, the overwhelming power of that tendency to produce a single effect upon thought, which finally blends the whole into a *unity*.[1]

Turning now to effects produced in the arts that are seen, it is probable that few of us have not noticed in our-

[1] Compare what is said here with the arrangement of the methods on page 131.

FIG. 43.—VILLAGE DANCE.—TENIERS.

See pages 16, 82, 144, 190.

selves a tendency to expect to find in them certain forms invariably associated—forms, too, with outlines and colors not at all similar, which in fact may belong to objects as dissimilar as human beings, buildings, trees, plains, hills, and clouds. A little thought will reveal that we expect to find these forms associated because we have become accustomed to think of them as associated in nature. We know that in the world they go together, therefore in art they seem congruous. Thus Oriental scenery and Moorish architecture, Italian scenery and Renaissance, Northern French and Gothic, are congruous. So are the costumes or attitudes of certain figures and certain places or periods. (See Gerome's "Pollice Verso," Fig. 26, page 81. So are certain outlines or colors, and delineations of war, of peace, of fright ("Death of Ananias," Fig. 94, page 288), of sorrow (Rubens' "Descent from the Cross," Fig. 16, page 73), and of merriment (Tenier's "Village Dance," Fig. 43, page 143). Sometimes the requirements of congruity, while evidently uppermost in the mind of the artist, are very closely allied to those of *repetition* and *consonance*, objects though different in themselves being made alike by being given like outlines or colors. See the fragment of the marble relief from the theatre of Dionysius, called "The Dancer," Fig. 56, page 183; also "The Storm" by Millet, Fig. 44, page 145. In many compositions like this latter, as in some of Ruysdael's landscapes, or in the sculptured group of Niobe and her children in the Museum degl' Uffizi at Florence, Fig. 45, page 146 every cloud, wave, leaf, limb, or shred of clothing on human forms may indicate the influence of the pervading fury of a tempest. In another, as in some of Claude Lorraine's landscapes, the light reflected from every tree, rock, stream, and countenance, as well as the character or attitude of the forms which

FIG. 44.—A STORM.—MILLET.

See page 144.

it illumines, may augment the suggested glow of the sunshine that pours from the sky. Notice the "Evening" of Claude, (Fig. 40, page 119) with the man and maid and attendant Cupid in the foreground.

The results of congruity are evident in architecture too. It is this mainly that causes most builders to associate Doric or Ionic pillars or pilasters with entablatures and

FIG. 45.—FROM GROUP OF NIOBE AT FLORENCE.
See pages 16, 144, 204, 257, 298.

horizontal openings, or, at times, with the round Roman arch; while the slender shafts and buttresses, gargoyles and other ornaments of the Gothic style are used with sharp or pointed arches. But so far as the appearance of forms alone is concerned, there is no reason why certain features of the Greek style should not accompany certain of the Gothic. To use them together would not violate in the least the fundamental principle of art, that like forms

FIG. 46.—TRANSFIGURATION.—RAPHAEL.

See pages 72, 82, 116, 118, 148, 257.

should be put with like. At the same time, to do so would cause art to associate features that have come to be clearly dissociated in the mind. For this reason, it is possible that, as long as the world lasts, no artist can mix them extensively without suggesting to some an amount of incongruity wholly inconsistent with those effects of *unity* invariably present in arts of the highest character.

The reference just made to Wagner's overture to "Tannhauser" suggests mentioning a painting in which the effects of *incongruity* and *comprehensiveness* noticed as characterizing the overture, are almost exactly paralleled. It is Raphael's "Transfiguration," Fig. 46, page 147. At the top of this picture, supposed to represent the summit of the mount, are the glorified forms of Christ, Moses, and Elias, on both sides of whom are the apostles present at the scene, bowing reverently before them. As suits the thought, in accordance with a principle that need not be now explained, almost everything in this half of the composition is delineated through a use of curves. At the bottom of the picture are others of the apostles, supposed to be at the foot of the mount, endeavoring in vain, amid the distress and consternation of the spectators, to cast out an evil spirit from a boy whom he is tormenting; and here, as suits the thought too, there is a more extensive use of straight lines and angles. The composition as a whole has been justly criticised because the distance between these two groups is too slight, the mount not being represented as sufficiently high. But this fault is not essential to the effect that we are now considering, of which it furnishes an excellent example. Few can fail to recognize the antithetic *incongruity* both of thought and form between the two parts of the picture, and, together with this, the grouping of like with like, so as to cause the

one to *complement* the other. Besides this, and because of it, the picture is *comprehensive*, as would not otherwise be possible, of the entire range of spiritual power on earth, all the way from the rapture of the Christ transfigured by the power of the Deity to the terror of the boy transfixed by that of the Devil.

In architecture also it is possible to have a departure from the requirements of *congruity* that shall enhance the general effect by increasing that of *comprehensiveness*. This is true, too, as applied not only to that kind of congruity just mentioned, which consists in an adherence throughout a building to the traditional forms of one historic style; but also to that kind which is founded on first principles. Especially is this so with reference to incongruity introduced in the ways that will be explained in Chapter XVII. in connection with *gradation*. As there indicated, a building may be made to be comprehensive of almost every possible style, say Greek in the first story, Norman in the second, and Byzantine in the third; and yet the effect can be thoroughly artistic, manifesting almost everything demanded by the requirements of *order* and for this reason of *unity*.

CHAPTER X.

CENTRAL-POINT, SETTING, PARALLELISM, AND SYMMETRY.

Especial Importance of Arrangement in the Composition of Features alike by Way of Congruity—Connection between this Fact and the Methods now to be Considered—Difficulty of Determining the Term Central-Point, and Objections to other Terms—Appropriateness of this—Same Difficulties and Objections to Terms for the Second Method—Appropriateness of the Term Setting—Connections between Central-Point and Principality, and Setting and Subordination—Parallelism—Symmetry and its Connection with the Methods Preceding it—Recapitulation—How Nature Suggests these Methods: the Vanishing Point and Radiation or Central-Point—Laws of Linear Perspective—Radiation Allied to Principality and Unity—Setting in Nature—Parallelism in Lines of Horizon, Rivers, Hills, Trees, etc.—Manifestation in Individual Forms of Nature, of Central-Point, Setting, Parallelism, and Symmetry.

WE have found that the object of *congruity* is to produce like effects upon thought; and that it is attained, largely, by means of objects in themselves unlike. It is in these circumstances, particularly, that they need to be made to seem alike by methods of composition. If, for instance, there is no relationship in appearance between a man, a horse, a dog, a sheep, a tree, and a bush, all of which, nevertheless have to be brought together, it is more important than when they are alike by way of *repetition* or *consonance* that a relationship should be created between them by the way in which they are arranged.

In accordance with this conception, the methods of securing *order*, to be next considered here, as those most

nearly connected with *congruity*, are such as have to do with dividing up the time and space occupied by congruous or incongruous features in ways intended to produce effects of likeness, in spite of opposing suggestions in the forms. It will be found, for instance, that by distributing objects of sound or sight on lines, real or ideal, meeting at a *central-point*, or, in some regular way, upon lines which furnish a *setting* for this, all the features of a composition can be made to become, in almost equal degrees, factors of the same general effect. So, by adjustments of a composition, a relationship by means of *parallelism* may be created, say, between the sound of a trumpet or a flute and the rattle of a drum, or between the body of a horse and the road over which he moves; or between the forms of bushes and of the robes of men, although, at the same time, none of these things, when compared, are sufficiently alike in themselves to be grouped distinctively by way of repetition or consonance. The same thing is true, too, of the representation of the balancing of the outlines or accents of many different features, some of them essentially different in essence, which we find in *symmetry*. Artistic arrangements of a composition, therefore, intended to secure effects according to the methods that we are now to consider, are especially important when like is put with like by way of *congruity*.

Before we go on, an explanation is needed of the terms to be employed here. It has been difficult to decide upon the first two of these. Radiation, ordinarily used for a part, at least, of what is here meant by *central-point* is, for the purpose, in one sense, too narrow, and in another too broad. It signifies the concentration of lines at one centre, or of light at one focus; but it fails to apply, except very metaphorically, to the concentration of words or

tones. Besides this, it signifies rather dispersion, or movement from a centre, than concentration, or movement to it. We might, therefore, use the term concentration; but this is already in use, and often, too, in order to designate something entirely different—that which is meant by *massing*.

Convergence, again, is a term that might be used. But this—and the same might be said of all the other terms suggested—emphasizes less than seems desirable the production in a composition of not many effects of this kind, but of a single effect. For such reasons a term less likely to be misunderstood, and at the same time inclusive of all that is intended, seems to be afforded in *central-point*.

Point is a word that is used when referring both to sights and sounds; and *central-point* includes all that can be signified by either *radiation*, *concentration*, or *convergence*, with much more besides. Moreover, the method to which it is to be applied, as may be seen by glancing at the scheme on page 131, is that which gives *principality* to effects of *congruity*; in other words, to effects produced upon thought. What term could better indicate these? When we speak of the point of a story or picture, to what do we refer but to the effect upon our thoughts produced by the way in which the ideas that are illustrated in each are brought to a centre or focus? Let us use this term, then, for the method through which this end is attained. With all due acknowledgment, too, of the subordinate importance in general of mere terminology, here seems to be an exception to the rule. It would be not a slight but a great gain for art, were it universally recognized, as it should be, that an essential condition of successful arrangement in a composition, is to bring not only all its factors, but also, through them, all the thought behind its factors to a *point*, and this, too, a *central-point*.

The second method is, in itself, easy enough to understand. We are all familiar with its effects. The difficulty is to find a term, appropriate for it, which has not already so many other uses as to deprive it of definite applicability here. As *central-point* implies bringing things to a centre, we might suppose that the antithetic condition could be expressed by circumference, contour, or outline. But these words are too limited in meaning; and although terms like relief, surrounding, environment, digressiveness, excursiveness, embellishment, circumstances might answer the purpose, they already have meanings which make them suggest something a little different from that for which we are now in search.

On the whole, the word *setting* seems to meet the requirements better than any other. Meaning that which encases or surrounds an object of chief interest, like a gem, it suggests an appropriate antithesis to *central-point;* and while it may refer to outlines constituting a contour, it may refer also to many other and very different things between the contour and the centre. It has, therefore, the breadth of meaning that is desirable in a word to be used in this connection. Besides this, like *point*, it is already employed in the arts both of sound and of sight, and in both is applied to relations of thought as well as of form. We speak of the *setting* of a story or of a melody, meaning its accompaniment, almost as frequently as of that of a play or a picture; and this *setting* of the story—and the same analogy holds good in the other cases—may mean either the thoughts and feelings that it is made to suggest, the spiritual atmosphere, as we sometimes call it, surrounding the whole; or the form in which it is presented,—if this be of verse, the form of verse employed.

Setting, moreover, is allied to *subordination*, just as

central-point is to *principality*.[1] As a rule, it is a *principal* consideration that appearances should have a *centre;* and at this, too, is usually their *principal* feature. The *setting* is a subordinate consideration. Many objects in nature, like smoke, clouds, and distant hills and mountains, melt into surrounding objects by such imperceptible degrees that, at a little distance from what, as related to our point of view, is their centre, they become indistinguishable; but we should not recognize that they existed at all, could we not perceive the latter.

A line, as long as it continues equidistant from another line having the same direction as itself, is *parallel* to it. We apply the term chiefly to straight lines; but it need not be restricted to these. Series of circles, too, described about a common centre are parallel. Nor need the term be confined even to lines. As will be shown presently, it has been used for centuries to signify any effects, whether of sight or sound, that are analogous to those of lines thus related.

The same relation that *central-point* sustains to *principality* and *setting* to *subordination*, *parallelism* evidently sustains to *complement*, and, in case the parallelism be between features on either side of a common middle or centre, to *balance*.[1] The latter, as thus produced, needs only to be developed, and it becomes *symmetry*.[1] This results when either curved or straight outlines describing a figure are so disposed that if, by a straight line passing perpendicularly through its middle, it be divided into two parts, these parts, when one is folded over the other, will everywhere coincide. *Symmetry*, therefore, is an effect produced by a figure when all its parts on one side of a line drawn per-

[1] Compare what is said here with the arrangement of methods on page 131.

pendicularly through its central-point balance those on the other side of this line. In other words, as stated in Chapter III., the method involves the principle of *complement* or *balance* made applicable not to a few but to all the factors of a composition. For this reason, it involves also the contemplation of figures as wholes; and, in connection with this, as follows naturally, it is universally acknowledged to be realized in perfection in the degree in which objects in nature or art possess, like living creatures, perfectly organized forms. Like *central-point*, *setting*, and *parallelism*, the term *symmetry*, too, is applied metaphorically to effects of thought as well as of form. A conception viewed only as such, in which the ideas presented are perfectly *organized* and *balanced* at every point, for this reason alone is said to have *symmetry*. Notice, however, that, when considered as an effect either of form or of thought, this kind of *balance* of all the factors cannot be completely manifested except in connection, by way of suggestion, if no more, with *central-point*, *setting*, and *parallelism*, from a combination of all of which, therefore, it is developed. In fact, as the necessity for these arises in a *comprehensive* combination of the *congruous* and *incongruous*, *symmetry*, as a method of organizing form, may be said to be connected logically with them also, and therefore with all the six methods preceding it in the list on page 131.

To recapitulate, *central-point*, *setting*, *parallelism*, and *symmetry* may, all of them, as primarily used with reference to lines, be said to have to do with direction. Lines extending through space may converge at a common *point* or *centre*, and thus radiate; or they may be described in such ways as to form a *setting* for the centre; or, whether doing this or not, they may coincide in their directions and be *parallel*; or several lines may do all

these things in a similar way as related to the same centre or central line, and so cause a figure to have *symmetry*.

Now let us consider, for a little, certain correspondences between these methods, as used in art, and the methods in which different objects are seen to be arranged in nature, which, in this as in every regard, is the teacher of art. *Central-point*, *setting*, *parallelism*, and *symmetry* are all illustrated, almost without exception, in every view of the world about us that the eye can see. It is scarcely just, then, to term them "tricks" of composition, as is sometimes done by those who have never come to recognize the connection between them and the conditions of nature. Even Corot, who, on account of selecting for representation certain effects of color not unnatural but not previously studied, is supposed to have been especially free from slavery to established methods of composition, did not disregard those that we are now considering. No effects of radiation and parallelism as produced by Claude (see Fig. 40, page 119), or Turner (see Fig. 51, page 175), could be more marked than the same as produced by Corot in Fig. 47, page 157, or even in Fig. 73, page 223.

But to be more specific, *central-point*, as used in art, is merely a development—sometimes, as is the case with many effects in art, an excessive development—of the natural fact that an object in the extreme distance is always related to an object nearer us in such a way that, if there were parallel lines drawn between the two, and extended far enough into space, such lines would meet in the distance and form a point. For instance, to one looking down a long street, or the tracks of a railway, the lines formed by the sidewalks and foundations and roofs of the houses, if they be of equal height, or of the two or more tracks of the railway, all converge in the distance, and,

FIG. 47.—THE CANAL.—COROT.

See pages 115, 118, 156, 158, 159, 172, 238.

though not actually meeting, suggest that they would meet, could a man see far enough. The point where, if extended, they would meet, is what the painter calls the vanishing point, and if he wishes to be mathematically exact in determining the sizes of his figures as represented at a certain distance, he will do so by drawing converging lines from the top, bottom, and sides of a like figure in the foreground, and making these, where they cross the place in which the figure is to be represented, measure the height and breadth. (See the trees in Fig. 47, page 157.)

This principle, as applied to art, is the basis of the laws of linear perspective. When carried out in a painting it makes all the objects represented appear to sustain the same relations to each other as in nature. Besides this, moreover—and here is the connection of the principle with our present subject—it can make all these objects sustain subordinate relations to one object of interest which, being in front of the vanishing point from which all the lines ideally radiate, necessarily suggests that everything is pointing toward it; and that it therefore was the principal object of consideration in the mind of him who produced the picture—the object at which, when painting, he was directly looking (see Fig. 50, page 173.) Thus we see how central-point, as indicated by radiation, augments the effect of *principality*.

But besides having a point which is a centre of radiation, and therefore of principal importance, all views in nature have that which augments the effect of *subordination*. It is found in the outlines which form the *setting* of this centre, outlines often dim and vague because of their distance in the background, but by which it is made clear, at least, that the range of vision, as well

as the lines of radiation, are brought to an end. It is interesting to notice, too, that the extreme limits of these outlines, as in those of the horizon and zenith not only, but also in the contour of any field of vision that can be comprehended in a single glance of the eye, are necessarily circular. This furnishes an additional reason for the use of the arched, or semi-arched, or oval contour, noticed on page 115, as so frequently suggested by the arrangements of figures in groups.

Once more, in addition to having a vanishing point which is a *centre* of radiation, and outlines that give this a *setting*, every view of nature has a horizon line, and with this usually a large number of lines *parallel* to it, described, if in a sea view, by the caps of the waves; if in a land view, by the bank-lines of rivers, by the tops of forests, by the ridges of hills, or by the snow-lines of mountains. Besides this, moreover, the view necessarily includes parallel upright directions taken by the trunks of trees and plants, not to speak of the necessary parallelism wherever stand human beings, or their buildings. See Figs. 47, page 157, 51, page 175, and 66, page 203.

Besides being exemplified in the arrangements, as related to each other, of all the forms made visible in a whole field of vision, the same methods, augmented usually, in this case, by those of symmetry, are exemplified in the arrangements by which the features of every single form are related. Whether we study the veinings of a leaf, or the branches of a tree, the adjustment of the nerves, veins, or muscles of any living creature, or of the hands, feet, and limbs of a man, we find in all a tendency toward radiation. Sometimes the limbs on each side of a tree diverge from a point in its trunk; sometimes, apparently, from a point on the opposite side of the tree

from that on which they are situated. As Ruskin says in his "Elements of Drawing," Letter III., from which this Fig. 48 is taken, there are any number of places where ideally the centres of radiation may be; but that they are somewhere, the slightest examination will usually reveal. To such an extent at least is this true, that no one can question the statement that the limbs of almost all plants and animals, each in a way peculiar to itself, have a tendency to radiate from the body to which they belong. This is a fact of nature to which we have become accustomed. Notice now that, as a result of this fact,

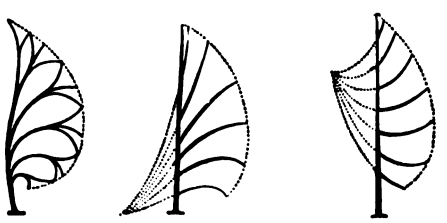


FIG. 48.—RADIATION IN NATURAL FORMS.

the mind, whenever it perceives any features, and not only so, but any objects whatever, arranged on lines radiating thus, is prompted to infer, in fulfilment of the law of association, that they are organically connected both with each other and with that in which the lines of radiation converge. Accordingly the use of these lines enhances the effect not only of *principality*, as already indicated, but also of *organic form* and *unity*.

The same general principle applies to *setting*, *parallelism*, and *symmetry*. We use them to secure unity in an art-product, because we have become familiar with them in connection with the same effect in a product of nature.

In a leaf or limb, for instance, whatever lines radiating from a centre it contains are usually ended by a *setting* of other lines described about this, and necessarily so by the lines of contour, which alone, as a rule, enable us to recognize that the object described by them is a single object. Scarcely less common than either of these methods, and often very closely related to both, is *parallelism.* In some trees, branches that begin by radiating become parallel soon, and continue so to their ends. In others, as in pines, parallelism seems to take the place of radiation altogether; and although radiation has been said to be exemplified in the arrangements of the nerves and muscles in the bodies of men and animals, nevertheless the arms, legs, fingers, toes, claws, as well as the two limiting sides of these separate members, and of the body as a whole, furnish examples of parallelism. As a rule, too, the way in which all the features on either side of a common middle, whether in the trunk of an animate or inanimate object, *balance* each other, illustrates *symmetry.*

FIG. 49.—JAPANESE COMPOSITIONS.
See pages 46, 161, 186.

No people, perhaps, apply the methods treated in this chapter more artistically than the Japanese, though often represented as ignoring them. Notice proofs of this in all four compositions in Fig. 49, reduced from "Fine Art Pictures," a Tokyo publication, by Katsugaro Yenouge.

CHAPTER XI.

ILLUSTRATIONS OF CENTRAL-POINT, SETTING, PARALLELISM, AND SYMMETRY.

Introduction—Poetic Central-Point in the Climax—Setting in the Digression—Illustrations—Parallelism in Metaphors and Similes—In what is Termed Parallelism—And in Lines of Verse—Poetic Symmetry with Illustrations—All three Methods in Poetic Form—How Manifested—Central-Point and Setting in Music—Parallelism and Musical Harmony : Illustrations—Symmetry—Connection between Lines Radiating from a Central Point and the Appearance of Unity and Principality in Visible Objects—Illustrations from Paintings—Curved Lines of Radiation—Lines of Direction in Architecture—The Nature of Setting in the Arts that are Seen—Parallelism and its Connection with Order—Illustrations from Painting and Sculpture—How it Gives Unity to Forms Associated by Way of Congruity—Symmetry : its Present Different from its Former Meaning—Symmetrical Paintings—Symmetry, an Application of the Principle of Complement to all the Features of the Two Sides of a Composition—Connection between Symmetry and Organic Form—Some Variety not Inconsistent with Symmetry.

THE methods considered in the last chapter cannot be fully understood except as we perceive how composition in each art is influenced by them. Thus far they have been treated as if they had to do only, or, at least, mainly, with effects that are visible. This was unavoidable. Primarily, such is the case; and in a general explanation of the methods it was necessary to begin where they begin. But just as *consonance* and *dissonance*, which have a primary applicability to the relations of

sound, are used for those of sight, so these, in which the conditions are reversed, are used for those of sound.

Turning first to poetry, the reader will recall how almost every great drama or epic contains passages in which the different incidents illustrating the general plot are made to converge and form what is called the climax; as, for instance, in the fifth acts of "Othello" or "Hamlet"; or in "Macbeth," where, just after the announcement of the death of Lady Macbeth, the revelation comes to her husband that the prophecies in which he has trusted, such as

> All hail, Macbeth, hail to thee, thane of Glamis.
> —*Macbeth*, iii. : *Shakespeare.*
>
> All hail, Macbeth, hail to thee, thane of Cawdor.
> —*Idem.*
>
> All hail, Macbeth, thou shalt be king hereafter.
> —*Idem.*
>
> Be bloody, bold, and resolute ; laugh to scorn
> The power of man.
> —*Idem*, iv., 1.

and

> Macbeth shall never vanquished be until
> Great Birnam wood to high Dunsinane hill
> Shall come against him.
> —*Idem*, iv., 1.

can all be fulfilled, and yet he can die by the hand of him concerning whom he has also heard the warning,

> Macbeth, Macbeth, Macbeth, beware Macduff.
> —*Idem.*

It is impossible for him to draw any other inference after hearing the words of the frightened messenger who

has seen Macduff's army approaching Dunsinane Castle, hidden behind boughs which they carry, taken from the woods of Birnam:

Messenger. Gracious, my lord,
I should report that which I saw,
But know not how to do it.
Macbeth. Well, say, sir.
Mess. As I did stand my watch upon the hill,
I looked toward Birnam, and, anon, methought
The woods began to move.
Macb. Liar and slave.
Mess. Let me endure your wrath, if 't be not so;
Within this three mile you may see it coming;
I say a moving grove.

—*Idem*, v., 5.

In nothing is the skill of a great literary artist made so manifest as through the effects he produces by causing all the materials at his disposal to converge thus at a *central point*. Notice, too, that, in every such case, long before the separate threads of the story are finally brought together, all through the composition, these effects are presented in such a way as to prepare the mind for that to which, for this reason, they may be said to *point*. It is hardly necessary to add now that these details together constitute what every one recognizes to be a part of the *setting*, another word for what is familiarly known as *elaboration*, forming, if it be extended to a connected series of events, a *digression*. In a well arranged composition, passages containing material of this kind are always kept *subordinate* to the *principal* conception, being made, as it were, to circle around this in such a way as to reveal clearly the relationship between them and it. The opening lines of each of the following sonnets, for instance,

have to do with the *setting;* and yet they all have a direct bearing in unfolding that which, in the closing line of each, or, at most, two lines, gives point to the whole:

A rose as fair as ever saw the North,
  Grew in a little garden all alone:
A sweeter flower did nature ne'er put forth,
  Nor fairer garden yet was ever known.
The maidens danced about it morn and noon,
  And learnèd bards of it their ditties made;
The nimble fairies by the pale-faced moon
  Watered the root and kissed her pretty shade.
But, well-a-day! the gardener careless grew,
  The maids and fairies both were kept away,
And in a drought the caterpillars threw
  Themselves upon the bud and every spray.
God shield the stock! If heaven send no supplies,
  The fairest blossom in the garden dies.

—*Sonnet: William Browne.*

Could I but grasp the vision, make it mine—
  In one full masterly embrace possess
The splendor of my dream, its joy enshrine,
  And hold it as some trophy-crown, to bless
With perfect calm and peace the conquest won;
  Or could I clear the mist, and fairly face
The high beatitudes of radiant morn,
  That reach through infinite degrees of space;
What then—ah, what? The heart would sigh for more;
  The longings of a great unrest would send
Swift-winged messengers far on before;
  Such glory undefined could only lend
A depth to height, a sadness to desire,—
  A voice forever calling: "Come up higher."

—*Infinito: Stephen H. Thayer.*

When I consider how my light is spent
Ere half my day in this dark world and wide,
And that one talent which is death to hide,
Lodged with me useless though my soul more bent

And the whole book of the Psalms is characterized by it.

> Thy fierce wrath goeth over me;
> Thy terrors have cut me off.
> They came round about me daily like water;
> They compassed me about together.
> Lover and friend hast thou put far from me,
> And mine acquaintance into darkness.
> —*Psalm* lxxxviii., 16, 17, 18.

It was this method of expressing the same thought in two or three different forms, all of similar length, that eventually led to versification, the sounds of the lines of which, as we hear them read, one after the other, produce an effect of parallelism upon the ear no less marked than the arrangement of them in printed lines does upon the eye.

Symmetry in poetry is an effect of *organism* in the form almost inseparable from a combination of *central-point*, *setting*, and *parallelism;* and always attendant upon them where all the factors to which they are applied are arranged with due regard for *balance*. The following two short poems will sufficiently illustrate this effect, and at the same time show, in concrete form, the influence of the other methods. In both poems, as in the sonnets just quoted, the thought centres in the last line, all the *setting* pointing to that, and attaining full significance only in connection with it; the lines of similar length, often, too, containing expressions of similar import, give us *parallelism;* and the balanced combination, manifested throughout the whole, results in *symmetry*.

> Here is one leaf reserved for me
> From all thy sweet memorials free;
> And here my single song might tell
> The feelings thou must guess so well.
> But could I thus within thy mind

One little vacant corner find
Where no impression yet is seen,
Where no memorial yet has been,
Oh, it should be my sweetest care
To write my name for ever there!
—*Verses Written in an Album: Th. Moore.*

Because I breathe not love to every one,
Nor do not use set colors for to wear,
Nor nourish special locks of vowèd hair,
Nor give each speech a full point of a groan,—
The courtly nymphs, acquainted with the moan
Of those who on their lips Love's standard bear,
"What! he?" say they of me; "now I dare swear
He cannot love No, no! let him alone."
And think so still—if Stella know my mind.

Profess, indeed, I do not Cupid's art;
But you, fair maids, at length this true shall find—
That his right badge is but worn in the heart.
Dumb swains, not clattering pies, do lovers prove,—
They love indeed who quake to say they love.
—*Love's Silence: Sir Ph. Sydney.*

Hitherto, *central-point*, *setting*, *parallelism*, and *symmetry*, as illustrated in poetry, have been very closely assimilated to methods of thought. There is a sense in which, in every art, this treatment of them is inevitable. As indicated a moment ago, to secure *unity* in connection with an effect upon thought, or *congruity*, is always their most important function. Moreover, there is a peculiar sense in which this treatment is necessitated in poetry. The factors of its forms are words, and words and thoughts are virtually inseparable. At the same time, they are not entirely so. Words are also forms of sound; and before we pass on, it ought to be shown how the arrangements of them, considered as expressions of thought, are represented, and their effects enhanced, by means of corresponding arrangements

of them considered as sounds. To do this, moreover, will merely carry out the analogy of what has been done already when treating of these methods as applied to visible appearances. It was then shown that *central-point*, *setting*, *parallelism*, and *symmetry* are illustrated not only in the arrangements of a general view of nature, but of the features of each specific object constituting a part of this view. We have so far considered the application of the methods to a composition considered as a whole. We have now to consider them as applied to separate objects in this whole.

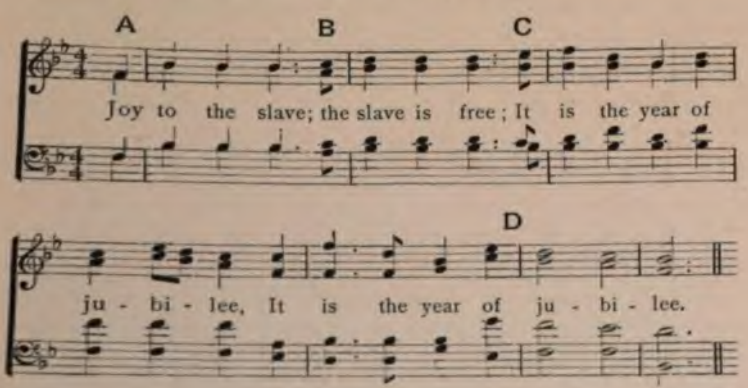
In what sense, then, can it be said that each of the methods under discussion can be fulfilled in forms of sound as they are heard constituting the separate parts of a composition? Let us answer this question, first, as regards *central-point*. Is there anything in a series of sounds that may be said to point? Certainly—the accents. These have the same influence upon an order of effects heard in succession, as do concentrating lines upon an order of effects seen simultaneously. The accents are like so many radiating lines that, one after another, keep directing attention to the movement—in other words, *pointing* to it. The unaccented sounds, again, that connect the accented, determining as they do, and as the accents do not, the particular rhythm or metre, whether double or triple, may be said to furnish the *form-setting;* while the series of lines of verse, called by the same name in this case, correspond exactly, as was said a moment ago, to the series of lines that produce *parallelism* in the arts of sight. The resulting *organic-form* of the movement, as secured in the general balance throughout of foot and line, measures the degree of *symmetry*. These analogies are so evident that they need only to be stated.

Let us pass on now to music. As all will recognize, there is a sense in which every musical composition has its *central-point* of interest or climax; and there is a sense, too, in which this is accompanied by a *setting*, consisting of movements elaborated, as it were, independently. In longer compositions (see the theme of Beethoven's "Symphony No. 5, in C Minor," printed on page 61), everything is centred in the fundamental melody, from which the whole is developed. Shorter works often have their centre in the key-note or the tonic chord of the principal key. At every critical change of the composition, and almost invariably at its close, the ear requires a suggestion of this theme or key, and, in the return to it, in connection with the various digressions, or, as we may term them, excursions from it, we have conditions analogous, as nearly as anything that is heard can be, to effects produced by *central-point* and *setting* as used in the arts that are seen. Often, indeed, in music, both results are attained as in these latter arts, at one and the same time, and thus too, like them, are capable of being represented visibly. Notice once more upon page 60, the music taken from the variations upon "Old Black Joe."

Parallelism in music is shown not only in successions of phrases of similar movement, corresponding to successions in poetry of lines of similar metre and length, but also and mainly in the whole constitution of harmony. As every one acquainted with the history of music knows, harmony began with an endeavor to sing, at the same time, two or more different melodies, the tunes of which were found, or made, to be parallel. In modern harmonies, as a rule, there is a distinct melody in only one of the parts, but there is still a sense in which the other tones making up the chords accompanying this, move along on

planes parallel to the melody. The following, in a small way, illustrates all these statements; and, like the music on page 60, it also does this to the eye almost as effectively as to the ear.

The section marked A illustrates unison, characterized by an absence of harmony; that marked B illustrates parallelism; at C counteracting phrases give a setting to the movements; and at D they are drawn together and made to centre in the chord of the keynote.



Symmetry in music, as in poetry, is a result of the general effect of all these other methods when arranged with due regard for *balance*. This is true, whether applied to a composition as a whole, or to parts of it. Accent, lack of accent, complement, and balance of phrase and period,—these respectively give unity of character to each specific movement, however long or short, in a way exactly analogous to that which is exemplified in the general movement.

The explanation of these methods as applied in the arts of sight was necessarily involved in what was said of them

in Chapter X. We noticed there their origin in nature. It needs to be said now that the artist uses them—not slavishly, merely imitating arrangements which he actually sees in the world about him—but intelligently, applying the principles illustrated in one place to the arrangement of factors which, as observed in another place, do not manifest them. Such a course is frequently the only one enabling him to form an organized whole out of material which, as found in nature, is disorganized. He has noticed the effects of radiation, for instance; so, instead of grouping objects at hap-hazard, or just as he sees them, he rearranges them in such ways that their outlines point toward a *principal* feature and also to a common *centre*, thus securing at the same time the effects of *principality* and of *unity*.

To illustrate this, the adaptation of the methods of radiation in strict accordance with appearances in the external world, may be noticed in the way in which in Troyon's "Cattle" (Fig. 50, page 173), the ruts, faintly indicating a road in the foreground, are made to carry the eye backward and concentrate attention upon the centre of the picture occupied by the approaching herd. More artistically, but in just as strict accordance with natural appearances, in Turner's "Decline of Carthage" (Fig. 51, page 175), Corot's "Canal" (Fig. 47, page 157), and "Landscape with Water" (Fig. 73, page 223), and in Claude's "Evening" (Fig. 40, page 119), the chief lines, both of contour and of light, are made to converge in the extreme background, and cross and continue themselves in the radiating lines of each picture's opposite side. A different adaptation of the same method, may be seen in Gérôme's "Pollice Verso" (Fig. 26, page 81). In the centre of this, a gladiator stands with his heel on the neck of a prostrate antagonist, and looks up for a signal to save the life which

is at his mercy. With scarcely an exception, the crowd of spectators, who fill an amphitheatre above, answer this appeal by stretching a hand towards the gladiator, with the thumb downward, indicating thus their desire to have him show no mercy to his fallen antagonist. Of course, all the extended arms, by pointing as they do, direct attention to the gladiator as the principal object of

FIG. 50.—CATTLE.—C. TROYON.
See pages 16, 158, 172.

interest, and also make of the whole picture a unity both in thought and form. But, in addition to this, the horizontal outlines in the front walls of the amphitheatre, which concentrate according to the laws of the perspective, also the outlines of a pillar of the amphitheatre and of one prominent division between its benches, as well, too, as the outlines of a form and the shadow of a gladiator

already slain and lying on the ground,—all these are given such directions that they too point toward the principal figure. The same method is exemplified again in Becker's "Othello" (Fig. 55, page 181), where the lines formed by a rug on the floor, by the railing of a porch, by a wall, and by the general directions indicated in the tops of buildings seen at a distance, all point toward the object of Othello's love, Desdemona.

A peculiar phase of this effect is mentioned by Ruskin in his "Winkleman's Ancient Art." He draws, amid the outlines of Turner's painting of the "Old Bridge over the Rhine at Coblentz" (see Fig. 66, page 203) five lines not straight but curved. These he continues on from the curved outlines of three boats and of one raft in the river, and of the back of a woman sitting on a ledge, and he shows how all the curves lead the eye toward a large tower from which they radiate, and which is the principal figure of the picture. The use of curves for this purpose is illustrated almost equally well in the "Landscape with Water" by Carot, Fig. 73, page 223. Notice in this, how the principal lines bend toward the distant bridge at the right.

When works of sculpture, as in the bas-relief, are composed of many figures, there is no reason why, so far as concerns outline, these effects should not be produced in the same way as in painting. In the "Romans Besieging a German Fortress" (Fig. 6, page 27), but especially in "The Soldier's Return," a relief on one side of the famous National Monument on the Rhine near Bingen, familiarly called "The Watch on the Rhine" (Fig. 52, page 176), notice how the lines described by the limbs of the figures on each side of the centre, are made to point, not exactly to the chief figures, but with equal effectiveness toward

FIG. 51.—DECLINE OF CARTHAGE.—TURNER.

See pages 16, 31, 82, 118, 156, 159, 172, 238.

them, and as if to an ideal central-point that is above them. A similar effect, but having a more direct bearing upon *symmetry* in that it directs attention to a *central-line* rather than *point*, yet evidently suggested by the way in which limbs *radiate* from a tree-trunk, may be observed in the Vatican statue of a German Captive (Fig. 53, page 177).

In architecture, this method is not used as extensively, perhaps, as it should be. At the same time, there is

FIG. 52.—THE SOLDIER'S RETURN.
(FROM THE NATIONAL MONUMENT NEAR BINGEN, GERMANY.)
See pages 16, 26, 174, 182, 257.

more of it than, at first, might be supposed. Even the laws of the perspective on which it is based were applied by the Greeks to produce effects in buildings in much the same way as we now use them to produce effects in pictures. This fact explains the slight upward curves which have been found toward the middles of the pavements of the porches on which the columns rested, also the corresponding curves in the entablatures, as well as

FIG. 53.—GERMAN CAPTIVE—ROMAN PERIOD.
(From Statue in the Vatican Museum.)

See pages 176, 182, 257.

the narrower spaces left between the columns at the extreme sides, as contrasted with the middles, of the porches, and other variations from exact measurements in other distant, as contrasted with near, features. Every thing in these buildings was planned so as to produce a desired effect from some supposable view-point. This subject can be treated properly only in connection with proportion. At present, it is sufficient to notice the evidences in architecture of the same sort of artistic developments from the laws of the perspective that have been noticed in the other arts of sight. Every one must have observed occasionally in connection with mouldings and buttresses, with divisions and cappings of windows and porches, with external and internal arches and ridge-poles of roofs, gables, and ceilings, but especially in connection with the sides of towers and spires, and with innumerable ornamental details, outlines that seem to suggest, at least, a desire to point the thought away to another feature of principal interest with which they are organically connected. Illustrations of these effects, sufficient for the purpose, may be found in the figures given in treating of continuity in Chapter XIV., which see. Undoubtedly it would add to the effects of buildings if more were made of this possibility, as might easily be done by bestowing a little more care upon the arrangements of the necessary lines and arches. Certain it is that, in any art, the mind, in glancing along in the direction to which an outline thus related points, takes pleasure in finding other lines continuing it or converging somewhere with it, and, even without consciousness of the reason, derives from this arrangement impressions both of principality and unity in connection with the whole, which nothing else could give.

The nature of that which in these arts may be called *setting* will suggest itself almost without illustration. As a rule, the principal features occupy the centre and foreground of a painting, and the *subordinate* features are delegated to its sides and back-ground. This is true, whether applied to groups of figures described about others, or to fringe, robes, trappings, or other ornaments described about single figures. It is the object

FIG. 54.—MITHRAS STABBING THE BULL.
(RELIEF IN THE LOUVRE.)

See pages 74, 120, 180, 218.

of chief interest that occupies the centre; the other objects surround it. Notice Gérôme's "Pollice Verso," Fig. 26, page 81. Just as the *central-point*, too, usually has reference to both thought and form, so has the *setting*. The fringe, robes, trappings, and other ornaments about a king, for instance, are given to him for the purpose both of interpreting and of ornamenting him. Observe the Swan with the "Leda," Fig. 17, page 74, the armor on the

"Titus," Fig. 18, page 74, as well as that which fills the background in the "Mithras and the Bull," Fig. 54, page 179. *Setting*, when thus properly subordinated, introduces variety and contrast not for its own sake, but for the purpose of adding by way of explanation and offset to that which is of central interest. In painting, either outline or color may be employed in the *setting;* in sculpture, usually only the former; but the possibilities connected with the adjustments of bands, girdles, drapery, canopies, niches, and, especially in bas-reliefs, of other figures surrounding the principal ones, obviate all practical difficulties in attaining any results that are desirable. In architecture, the method is manifested by the way in which doors, windows, and other individual features are ornamented, usually in connection with their surroundings; and whole buildings also in connection with their foundations, gables, roofs, and towers. A moment's thought will convince us that there is a true sense in which these are all parts of the *setting*. Notice the doorways in Figs. 95 and 96, pages 289 and 290; also the "Taj Mahal," Fig. 3, page 19, "St. Mark's," Fig. 31, page 88, "St. Sophia," Fig. 42, page 123, and the "Château de Rondeau," Fig. 85, page 258.

Parallelism is a development of methods of *setting*, in conformity with the requirements of *order*, especially of these as manifested in the direction of *complement* and *balance*. We all must have observed that while a single line, described by being drawn or worked along the edge of any material, forms a border for it, two or more lines, made parallel to the first, cause the border to appear more satisfactory. A similar effect results from the parallelisms that are seen in the flutings of columns, in the mouldings of picture frames, in the string-courses and cornices of

buildings, as also in the caps and sills of their windows and doors.

In the forms of pictures and statues, necessitating, too, in the main a use of widely differing curves, we frequently find the arms and lower limbs, indeed the whole figures and

FIG. 55.—OTHELLO.—CARL BECKER.
See pages 72, 174, 181, 239.

the folds of the drapery about them, as well as the surrounding architectural arrangements of pillars, pilasters, arches, and furniture, all grouped in such a way that their prominent outlines are parallel, or very nearly so. In the original of Becker's "Othello," Fig. 55, above, one can count

at the top of the picture forty-two distinctly parallel perpendicular lines, used in the delineations of two distant churches and their domes, the mast of a ship, three pillars of a porch, a swinging lamp, the figure of the Moor, etc. At the right, there are also twenty-two horizontal lines of this kind, found in a rug, a platform, a bench, a mantelpiece, a niche, etc. At the left, are fifteen on the floor extending diagonally, and twenty others formed by a rug and the railing of a porch; while, in at least three cases, three sets of these lines can be detected amid the directions suggested by the limbs and drapery in the group composed of Desdemona and her father. In Gérôme's "Pollice Verso," Fig. 26, page 81, one can count fifteen parallel horizontal lines, nine of them formed by the architectural work with rugs hung over it, which is in front of the spectators, and six by the bodies of three dead gladiators lying in the arena, apparently without any regard to the requirements of order, just where they have been slain. Besides this, in the same picture, we can count, including all that can be seen in pilasters, pillars, doors, etc., almost sixty of these lines that are perpendicular. Among the figures of the spectators, at least six extended arms are exactly parallel; so is the dirk, the shield, and one leg of the principal figure; and his arm that holds the dirk is exactly parallel to the extended arm of his antagonist who is at his feet. *Parallelism* is just as evident a characteristic, too, as is *central-point*, of the sculpture represented in Figs. 52 and 53, pages 176 and 177, and in Fig. 6 of page 27. Notice the same characteristic in the "Dancer" also, Fig. 56, page 183, as well as in the "Laocoön," Fig. 75, page 226. It may be of interest also to recognize the antiquity of this method, as may be done by a glance at the Chaldean bust now in the British

Museum, inscribed with the name of "Nebo," Fig. 57, page 184.

The effect of all this parallelism, as was indicated on page 151, is to make objects that frequently are only associated by way of congruity, and therefore only ideally alike, seem, nevertheless, to have like directions or tendencies. Moreover, in connection with the other effects of outline, it divides the spaces covered by a composition so that all things put into them appear to be grouped in an orderly way. It may be well to notice, too, that in this it corresponds exactly to the effects of verse and phrase, which in poetry and music, in a similar way, divide up the time.

FIG. 56.—DANCER.
(From the Marble Relief Discovered in the Theatre of Dionysus.)
See pages 16, 144, 182, 257.

Symmetry, as has been said, is a general balance of all the parts of a composition. There can be no such balance when the effects just considered are entirely absent; and when they are present they almost necessarily involve it. But besides this, as applied to visible forms, symmetry seems to suggest especially the idea of an effect produced by balancing pairs of many numbers in an organized body, like that of a man or a horse. This idea is probably

derived by way of association from the former significance of the term, which now it has lost. By symmetry, from *σὺν* and *μετρόν*, the Greeks meant what we now call proportion, or, as they defined this, a form, all the members of which have a common measure among themselves. Their

FIG. 57.—A BUST INSCRIBED WITH THE NAME OF NEBO.—(British Museum.)
See page 183.

conception of proportion they derived, primarily, from the measurements of the human figure. But, according to our use of the terms, while a well proportioned form would always be symmetrical, a form like that of a very slim man

might be symmetrical, as far as it went, and yet would not be well proportioned.

Of proportion we cannot speak further here. The term *symmetry*, as has been said, necessarily involves that of many pairs of balancing features. In this sense, the word symmetrical is applied by way of designation to certain paintings, especially those of the early Italians, in which there are precisely as many figures on one side of the principal figure as on the other side. See the "Lucca Madonna," by Fra Bartolommeo, Fig. 58, on this page.

FIG. 58.—LUCCA MADONNA.—FRA BARTOLOMMEO.
See pages 72, 185.

Symmetry is a term that may be applied, of course, to any developments of *complement* or *balance*, as already considered on pages 46 and 84, in the degree in which the principle underlying their effects, whether in the arrangements of equal numbers or like outlines, is applicable to all the features on one side of the middle perpendicular line of a product as compared with all those upon its other side.

The intimate connection, too, already indicated by the arrangement of the methods on page 131, will be observed here between *symmetry* and *organic form*. In fact, all the various methods of grouping the factors of paintings or statues, so as to have the contours of the wholes suggest a circle, an oval, an arch, a pyramid, or a wedge, such as were mentioned on pages 115–118 are almost as much necessitated by the requirements of symmetry as of the method which they are there used to illustrate.

The principle of *variety*, however, which we find everywhere illustrated in nature and in art, must not be supposed to be entirely inoperative in connection with symmetry. The two sides of even a very symmetrical tree do not exactly correspond, and a tree depicted in art is most apt to have the appearance of life, if the same be true of it.[1] The two sides of a man's body are more nearly alike than those of a tree; but in the degree in which he possesses life and consequent grace, they will, while suggesting likeness, be made unlike by the positions which he assumes. Notice Fig. 7, page 30; Fig. 19, page 75; and the "Gladiator" in Fig. 26, page 81. The same must be true to some extent of a building. The slight deviation from exact regularity, owing to the position of the central tower in the "Old Louvre," Fig. 59, opposite, does not interfere with the artistic impressiveness of the castle as a whole. The same is true of the slight lack of exact balance in "Salisbury Cathedral," Fig. 68, page 207, as well as in "Shadyside Church," Fig. 34, page 91. As was said on page 87, the dignity of effect demanded in public edifices may sometimes necessitate absolute similarity on both sides of the centre, as in the "Taj Mahal," Fig. 3, page 19, "St. Peter's, Rome," Fig. 23, page 78, "St. Marks, Venice," Fig. 31, page 88, and "St.

[1] Notice floral arrangements in Fig. 49, page 161.

Sophia," Constantinople, Fig. 42, page 123. Graceful effects, on the contrary, such as are desirable in household architecture, may sometimes be best secured by difference, as in the villas in Figs. 24, page 79, and 28, page

FIG. 59.—THE OLD LOUVRE.
See page 186.

84. But how about a combination of dignity and grace? This is as difficult to attain in art as in life. But when it is attained in either, is there any denying that we have the ideal?

CHAPTER XII.

REPETITION, ALTERATION, AND ALTERNATION.

Importance and Order of Development of Repetition as Contrasted with Congruity—Repetition, a Necessary and Elementary Factor in all Forms—Alteration—How Differing from Variety—Alternation and other Allied Methods—The Influence of Repetition, Alteration, and Alternation upon Thought—How they are Exemplified in Nature—In Art; Poetic Repetition with Alteration in Lines, Feet, Alliteration, Assonance, Rhymes—In Recurring Refrains, Choruses: Explanation of the French Forms of Verse—In Epithets and Phrases—Alternation in Accent and Lack of Accent and in Rhyming Lines—The Three Methods in Music—The Three in Primitive Forms of Ornamentation Appealing to Sight—In Painting: How Imitated from Nature and how Produced by Artistic Arrangements of Forms—Even of Landscapes—The same in Color—In Sculpture—In Architecture—The Fundamental Reason why Styles should not be Mixed—Necessity of Unity of Effect.

OF the three methods of bringing together forms that compare—by *congruity*, by *repetition*, and by *consonance*,—*repetition* has been assigned the second place, not because historically it was the second to be manifested in the development of art, nor because it is to-day the second in importance. On the contrary, reasons might be adduced to show that it was the first to be developed and is to-day the first in importance. One might claim, in fact, that both *congruity* and *consonance* are modifications of it, and allowable merely as any variety is allowable. But while conceding all that could be proved in this direction, it seems to be true, nevertheless, that, in the composition of

the higher arts, the artist starts with a form that embodies a general conception, a thought, and strives first to connect this with other forms embodying the same thought, or like it by way of *congruity;* and only later comes to *repetition*, which has to do with arranging such details as foot and rhyme, and line and limb, so that all the minutiæ of form as form shall manifest the ever prevailing domination of *comparison.*

However, if thought can never become art until it be given a form, and if a form be, as has been said, an appearance; and if an artistic form be an appearance in which like is put with like, it is evident that the effect produced by the *repetition* of the same appearance is something which no artist, whatever the quality of his thought, can afford to neglect. Indeed, when we inquire into the causes of rhythm, proportion, and harmony of tone and color, as well as of all the subtler qualities that make the arts exactly what they are, we are forced to acknowledge that there is no one of them, as we now know them, the form of which is not based on *repetition* as an elementary method.

The contrasting form of repetition is *alteration*—a better term than *change*, because indicating a difference not so radical, and yet sufficient for that which is intended. It is comparatively easy to produce effects of *variety* by introducing forms that involve entire change, as in the different rhythms and movements in the quotations in Chapter II., page 20, and in the different sizes, positions, and attitudes given to the forms in Figs. 14, page 70, and 15, page 71, as well as to the different shapes given to the coverings of openings and to roofs and domes in Fig. 4, page 21; Fig. 5, page 23; Fig. 67, page 205, and to those of the "Design for a

Theatre and Ton-Halle," more than one half of which is presented in Fig. 60, page 191, the other side being a counterpart of this. But it is not so easy to produce such effects by introducing *alteration* into forms that, throughout a composition, remain the same in principle; as in the different and yet similar metres in the quotations in Chapter II., on page 24; in the different and yet similar positions given to the forms in Fig. 16, page 73; Fig. 43, page 143; and Fig. 70, page 215; and in the different and yet similar shapes given to the coverings of openings and to roofs and domes in Figs. 2, page 17; 3, page 19; 12, page 49; 31, page 88; 42, page 123; and Fig. 68, page 207.

The latter course alone perfectly fulfils the requirement of art that *variety* should be kept *subordinate* to *unity* and *comparison*. At the same time, *alteration* thus interpreted evidently requires and manifests brain-work; and it is by the brain-work involved as much as by conformity to æsthetic laws, that the world in general measures artistic achievement. For instance in the "Public Library," Fig. 61, page 193, can any one fail to recognize how much more thought it would have required to produce an equally effective entrance by having the same general shapes there as in the window-caps at its side, yet *altered;* or to produce an equally successful side for the practical needs of a library, by having the same general shapes there as over the openings at the entrance? It is proper to say, therefore, that the Shadyside Presbyterian Church, by the same architects, Fig. 34, page 91, is superior, artistically, to this Library, for one reason, because it manifests more brain-work.

Alteration and *repetition* used conjointly in such ways

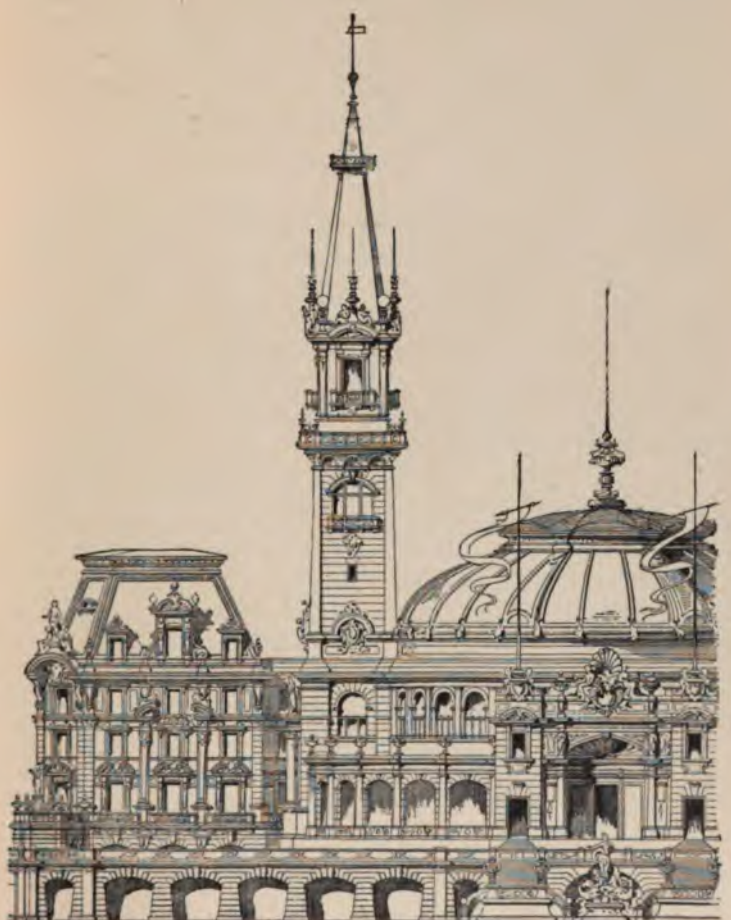


FIG. 60.—PART OF DESIGN FOR THEATRE AND TON-HALLE, ZURICH, SWITZERLAND.

See pages 22, 190, 208, 261.

as to fulfil the principles underlying *complement*, *counteraction*, and *balance*,[1] lead to what we all know as *alternation*. The bringing together of repeated effects so that those that are alike in one regard are in one place, and those that are alike in another regard are in another place; as, for instance, when all the light in a painting is near the *central-point*, and all the shade at the sides, described about the light, is called *massing* or *breadth*. When like features are not massed but scattered and mixed, indiscriminately, with unlike ones, we have that development of *confusion* which may be termed *interspersion*.[1] *Repetition* and *massing*, introduced notwithstanding apparent *interspersion*, give us an outgrowth of *complement* or *balance*, called *complication*.[1] Finally, when, under such conditions, *order* has had its perfect work, the outlining of the group that results manifests *continuity*.[1]

When we pass from *congruity* to the methods now to be considered, we leave the region where thought and effects upon thought are uppermost in the mind of the artist. *Repetition* and everything associated with it, have their origin in the exigencies of form. At the same time, we cannot be reminded too frequently that all forms, as used in art, are methods of representing thoughts or feelings by rendering them more concrete and emphatic. Recalling this, we have but to apply the principle to the methods before us, and we shall recognize that there are no ways of embodying thought in forms that are more certain than these to influence both sense and soul together. The slightest perceptible rubbing or scratching against any part of our body, if repeated a sufficient number of times, will cause inflammation. The slightest perceptible vibration that can affect the organs of hearing

[1] Compare what is said here with the arrangement of methods on page 131.

or sight, if repeated with sufficient rapidity and persistency, will produce a sound or a color, and nothing except repetition will do this. The same is true of its use when appealing more directly to the mind. "What a wonderfully complete system of police signalling these Germans have!" said an English gentleman to me in Stuttgart.

FIG. 61.—PUBLIC LIBRARY, NEW LONDON, CONN.
See pages 123, 190.

"They are at it now, as they have been for nights past." We stepped out upon a balcony which stood high on a hillside, and looked down upon the moon-lit city. "Listen," he said; "first you hear a whistle off there at the railway station; then one at the palace; then one farther up here on the hill." I listened; and what I heard,

and what he had heard, came from tree-toads in the garden under us. A single note would not have attracted his attention. It was the repetition of the notes that had filled his imagination with visions of socialists, and the efficiency of police supervision under a military government. So with objects in the field of sight. An ordinary fence made of continuous boards has little to cause us to notice it. Make it a picket fence, and the repetitions of the pales with the alternating spaces between them will at once give it interest. Introduce still more both of ***repetition*** and *alternation*, by placing here and there a post of a different pattern and capping, and the fence will become an important feature in the landscape, which no one can pass without observing.

As in the cases of the other methods that we have considered, *repetition*, *alteration*, and *alternation* are abundantly exemplified in nature: *repetition* with *alteration*, in the cry, chirp, hair, feathers, teeth, claws of every beast or bird; in the limbs, leaves, flowers, fruit of every tree or shrub; in the cliffs, stones, shells of every lake or river; and *alternation* in the rise and fall of the sounds of the wind, of the notes of the bird, of the accented and unaccented syllables of speech; in the limbs of trees outlined against the intervening sky behind them; in the veinings and plain surfaces of leaves; in the stripes of different colors upon shells or coats of animals; in the very fingers and the spaces between them on which the eyes must gaze when doing anything artistic. No wonder that art, in representing natural forms, should reproduce these effects, and, in elaborating its reproductions, develop them still further.

Let us notice now how this is done; and, first, in poetry. What is it that causes form in this art? The most

superficial thought reveals—what more thorough study confirms—that poetic form is made up almost entirely of a series of *repetitions*, of lines of like numbers of feet, of feet of like numbers of accented and unaccented syllables, and of alliterations, assonances, and rhymes of like sounds, all following one another in close succession. Yet few of these repeated elements are exactly the same. The rhymes and lines and feet and rhyming words in almost all poems that we admire, include sufficient *alterations* to relieve the repetitions of even a suggestion of sameness. Notice again the quotations in Chapter II., page 24.

The principle of repetition explains the use, too, of choruses and refrains with which we are all familiar. Notice the French forms of verse illustrating what is said on pages 55 and 107. Any one who will examine those selections, or the following, cannot fail to remark the amount of repetition in them, either in whole lines, phrases, or rhymes. Elaborate essays have been written in attempts to give the reasons that have led to the construction of these forms. It is one proof of the importance, if a man would understand a single art, of making a comparative study of all the arts, that, as this book shows, there are no reasons whatever underlying these French forms other than those underlying all art-forms. In fact, the *roundel*, *rondeau*, *ballade*, *villanelle*, *triolet*, and their like, are precisely what one ought to expect that a people, possessing so keen a sense of form as the French, would naturally and almost necessarily develop. Observe the repetitions in the following:

My day and night are in my lady's hand;
I have no other sunrise than her sight;
For me her favor glorifies the land;
Her anger darkens all the cheerful light,

Her face is fairer than the hawthorne white,
When all a-flower in May the hedge-rows stand;
While she is kind, I know of no affright;
My day and night are in my lady's hand.

All heaven in her glorious eyes is spanned;
Her smile is softer than the summer's night,
Gladder than daybreak on the Faery strand;
I have no other sunrise than her sight.

Her silver speech is like the singing flight
Of runnels rippling o'er the jewelled sand;
Her kiss a dream of delicate delight;
For me her favor glorifies the land.

What if the Winter chase the Summer bland;
The gold sun in her hair burns ever bright.
If she be sad, straightway all joy is banned;
Her anger darkens all the cheerful light.

Come weal or woe, I am my lady's knight,
And in her service every ill withstand;
Love is my lord in all the world's despite,
And holdeth in the hollow of his hand
My day and night.

—Rondeau Redouble: John Payne

Where are the creatures of the deep,
That made the sea-world wondrous fair?
The dolphins that with royal sweep
Sped Venus of the golden hair
Through leagues of summer sea and air?
Are they all gone where past things be?
The merman in his weedy lair?
O sweet wild creatures of the sea!

O singing syrens, do ye weep
That now ye hear not anywhere
The swift oars of the seamen leap,
See their wild, eager eyes astare?
O syrens, that no more ensnare
The souls of men that once were free,

Are ye not filled with cold despair—
O sweet wild creatures of the sea!

O Triton, on some coral steep,
In green-gloom depths, dost thou forbear
With wreathëd horn to call thy sheep,
The wandering sea-waves to thy care?
O mermaids, once so debonnair,
Sport ye no more with mirthful glee?
The ways of lover-folk forswear?—
O sweet wild creatures of the sea!

Envoy.

Deep down 'mid coral waves, beware!
They wait a day that yet must be,
When ocean shall be earth's sole heir—
O sweet wild creatures of the sea!
—*Ballade of the Sea-Folk: William Sharp.*

A similar principle explains also the recurring epithets and phrases used in longer poems, in which the absence of rhyme and its allied elements renders the employment of the more common methods of repetition impracticable. There is a subtle effect of unity imparted by repetitions, such as we find in Homer, of phrases like *swift-footed*, *large-eyed*, and *winged words*. The same is true of the repetitions of longer phrases and whole lines, as in the effects, also Homeric in origin, which are so admirably imitated by Tennyson in his "Passing of Arthur."

Take Excalibur
And fling him far into the middle mere;
Watch what thou seest and lightly bring me word.
. . . . . .
Yet I thy hest will all perform at full,
Watch what I see and lightly bring thee word.
. . . . . .
As thou art lief and dear, and do the thing
I bade thee, watch and lightly bring me word.

And again:

> And caught him by the hilt and brandished him
> Three times, and drew him under in the mere;
> But ere he dipt the surface, rose an arm,
> Clothed in white samite, mystic, wonderful,
> And caught him by the hilt and brandished him
> Three times, and drew him under in the mere.
> And lightly went the other to the king.

Of which the knight Sir Bedivere tells as follows:

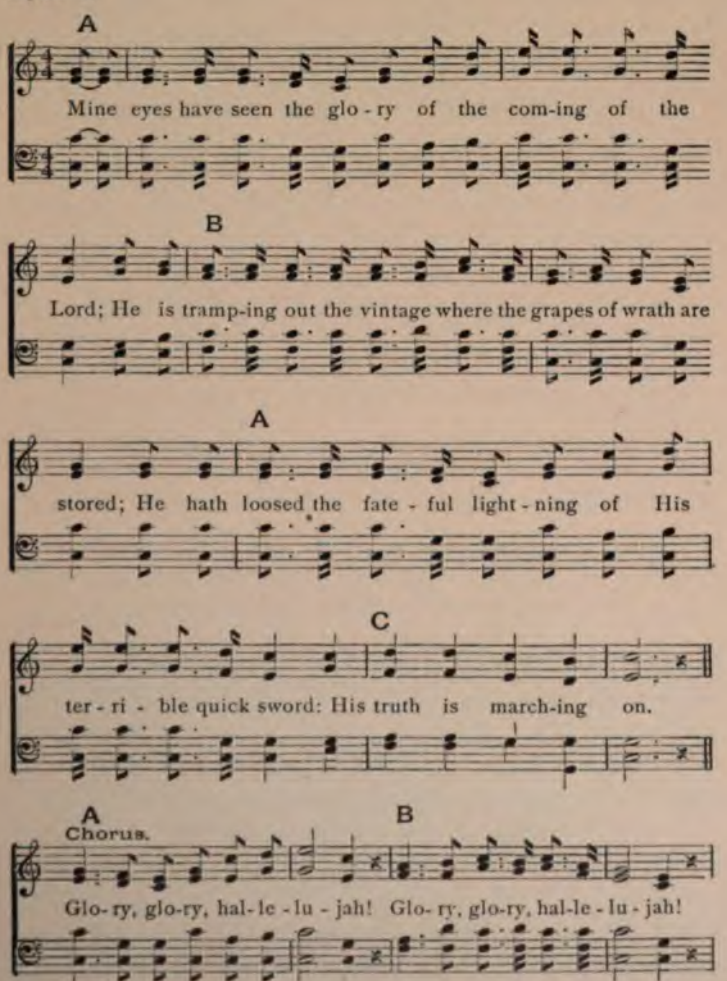
> Then with both hands I flung him, wheeling him.
> But when I looked again, behold an arm
> Clothed in white samite, mystic, wonderful,
> That caught him by the hilt and brandished him
> Three times, and drew him under in the mere.

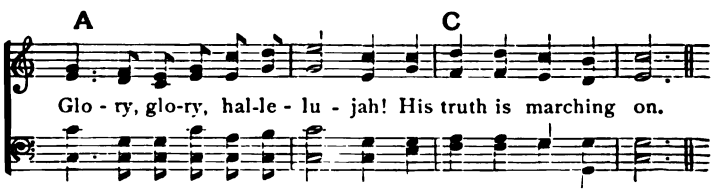
Alternation is almost equally characteristic of poetic form. Rhythm, with the feet and measures that enter as an essential factor into it, is dependent on the regularly alternating recurrence of accented and unaccented syllables. The effect of many of our rhyming verses, too, is dependent on the same *method*, the metre, length, and rhyme of one line corresponding to those of the second line following, and not to those of the first, *e. g.:*

> The merry brown hares came leaping
> Over the crest of the hill,
> Where the clover and corn lay sleeping
> Under the moon-light still.
> —*A Rough Rhyme on a Rough Matter: Kingsley.*

Repetition, *alteration*, and *alternation* are equally characteristic of the forms of music. In every shortest melody, like notes, phrases, refrains and cadences recur and alternate over and over again; yet always, in a composition that is successful, with sufficient *alteration* to prevent monotony. Notice illustrations of this in the music on

pages 25, 43 and 67, also in the following typical melody. Like strains in it are indicated by like capital letters, A, B, or C.





—Battle Hymn of the Republic: Words by J. W. Howe.

The same methods are exemplified also in forms of art appealing to sight. The earliest kinds of ornamentation, as we can see it to-day in the rude lines scratched on ancient pottery, are merely series of repetitions; and in our own times the recurrence of similar outlines, however insignificant, when they are marked or worked near the edge of a piece of wood or cloth, gives it a border, and we admire it the more on account of the border. Or, if we ornament with more elaborate figures, it is mainly the *repetition* of them that causes them to be attractive. Take the Vitruvian scroll, as it is called, so frequently found in

FIG. 62.—VITRUVIAN SCROLL.

pottery, goldsmith's work, and architecture, Fig. 62, or the Greek fret, Fig. 63.

FIG. 63.—GREEK FRET.

The charm of these lies in the repetition. In connection with such ornamentation we often find alternation

too. See this section of an ornamented doorway from Khorsbad, Chaldea, Fig. 64. In the older Greek temples, the Doric frieze was made up of a series of

FIG. 64.—SECTION OF ORNAMENTED DOORWAY, FROM KHORSBAD, CHALDEA.

triglyphs alternating with metopes, either containing plane surfaces or else chaplets, or pateræ, as in Fig. 65. So in the pavements, walls, and ceilings, both of ancient

FIG. 65.—TRIGLYPHS AND METOPES.

and modern architecture, we often come upon *repetitions* and *alternations* of color, usually of white and red, or blue and red. The different ways, in fact, in which these

methods of ornamentation may be used in decorative art, are almost infinite.

In order to apply the same methods to painting, it is not necessary for the artist to discover and imitate things actually repeated in the external world, any more than it is necessary for the poet to hear rhythmical language in order to arrange in rhythm his representations of what he hears. We might indeed, derive some pleasure from a picture, as we should from a view in nature, of a row of trees lining an avenue, or of a company of soldiers marching in procession. But a scene like this, unless it included other things, introducing variety into it, would seem artificial; inasmuch as it would be a copy—less of anything natural than—of something already put into artificial conditions by man. A more successful kind of repetition to be copied in a picture, would be like that found where images of trees and shrubs are reflected from the surfaces of rivers, showing the same things repeated indeed, but with some *alteration* and *alternation*. Or, instead of being mirrored, the trees might be repeated with effects equally satisfactory if, in their shapes, sizes, and positions, there were just sufficient *alteration* to give them the individuality that is found in nature. But the effects of *repetition*, for reasons already mentioned on page 150, are often secured merely by artistic composition; *i. e.*, by arranging objects, not alike in every regard, in such ways that certain of their features are seen to be alike in some regards, or at least to suggest this likeness. The *repetition* thus introduced differs little, if at all, as will be noticed, from *parallelism*. But, as has been said before, all these art-methods are very closely connected, being all developed from similar principles.

It is easy enough to perceive how, in an ideal work, com-

posed like Gérôme's "Pollice Verso," repetitions could be introduced at will. But it is difficult to understand how the same can be done in painting a landscape, especially if copied from some definite scene. The problem, according to Ruskin ("Elements of Drawing," Letter III.), was solved by Turner in a painting of the "Old Bridge on the Rhine at Coblentz," in this way. Three boats and one raft were placed in the river, each holding two persons. Besides this, the distant single spires of the city were so

FIG. 66.—OLD BRIDGE AT COBLENTZ.—TURNER.

See pages 48, 159, 174, 203.

grouped that, in three cases, two of these spires taken together (in each instance a large one and a small one, introducing thus, as will be noticed, the principle of *alternation*) looked like *repetitions* of each other and of two others on the bridge, the larger of which latter was the principal object in the foreground. Although there is really no one place from which the spires of the city can be seen in positions to produce these effects, Ruskin praises the painter for having the ingenuity to arrange his picture as if he had seen them thus. See Fig. 66.

Color, too, may be applied so as to exemplify these methods. The effects of *tone* so much admired in a painting, effects produced where the whole of a scene presented seems to be dominated or pervaded by a similar hue, are largely due to constant *repetitions*, and, in some cases, under the influence of light and shade, of *alterations* and even *alternations* of the tints and shades.

In sculpture these methods are necessarily included in almost every faithful copy of that which is seen in nature; yet, in this art, too, there are opportunities for a purely original use of them, especially in the arrangements of folds of drapery and of different figures in groups. How impossible it would be to give attractiveness to the ideas embodied in the groups of the "Laocoön," Fig. 75, page 226, and of "Niobe and her Children," Fig. 45, page 146, were it not for innumerable repetitions in the expressions of the countenances and in the adjustments of limbs and drapery! "When we survey the ancient monuments of Egypt," says Chas. Blanc in the introduction to his "Art in Ornament and Dress," "abounding as they do in colored reliefs or surface paintings, we are often arrested by a group of figures in simultaneous and rhythmic action, all executing the same movement, the same gesture, and the same sign. When this action is not purely material, such as leading animals, thrashing out corn, or carrying bricks; when this action, I say, is in harmony with the sentiment; when it expresses, for example, worship or prayer, or the humility of a band of weeping captives prostrating themselves at the feet of the conqueror, their heads raised to him in supplication, this rhythmic movement partakes of a religious character, and the repetition of the gesture seems to bring it within the pale of sacred rites. The spectacle becomes solemn, nay, almost sublime."

Architecture, too, in all its most successful prodocts, is full of illustrations of these methods. When applied to forms, they constitute the main element determining

FIG. 67.—CHURCH OF ST. NIZIER, LYONS.
See pages 22, 189, 206, 208, 261.

what is called a *style* of architecture; when applied to spaces, the main element determining what is called *pro-*

portion. They manifest their presence, too, in a majority of the appearances of buildings with which we are most familiar; *e. g.*, in rows of like columns with like flutings, in like mouldings and carvings of entablatures, some of which have just been noticed; in walls strengthened by like buttresses and pierced at like intervals by windows of like shapes and sizes, as well as in cappings of openings and in pediments of gables and roofs, wherever any large numbers of these describe like angles.

The requirements of these methods, in fact, even more than those of *congruity* mentioned on page 146, underlie the principle that different styles should not be mixed; as they are, for instance, in this "Church of St. Nizier, Lyons," Fig. 67, page 205. They base the principle, moreover, upon rational grounds, which is not done when it is said or implied that to observe it, is to do as the Greek or Gothic builders did. We are under no obligations to do as these did. The world may improve in art as in other things. Yet, as every thinker knows, all improvements are in the nature of developments that are made in strict accordance with fixed laws. We have found that scientific classification, as well as artistic construction, demands that like be put with like. This demand is beyond the reach of any human power that may seek to change it. It exists in the constitution of the mind. No architect can disregard it, and produce a building satisfactory to men in general. No building has ever obtained and preserved a reputation as a work of art, in which this requirement has been neglected. As a proof of this statement, as well as an evidence of the universality with which a principle can be applied when giving expression to a truth that is really fundamental, notice not only "Salisbury" (Fig. 68, page 207), which is usually considered the most nearly perfect

of the English cathedrals, but the classic buildings in all styles represented in Figs. 69, page 208; 1, page 15; 2, page 17; 3, page 19; 23, page 78; 31, page 88; 32, page 89; 42, page 123, and 97, page 292. The true reason, therefore, for not introducing the forms of Greek, Roman-

FIG. 68.—SALISBURY CATHEDRAL, FROM THE NORTHWEST.
See pages 18, 76, 186, 190, 206, 261.

esque, and Gothic architecture into the same building, is that, as a rule, such a course is fatal to unity of effect. These principal styles and some of the subordinate styles developed from them differ so essentially that to blend them is to cause confusion in the form where the mind

demands intelligibility, which, so far as our present line of thought is applicable, means something in which many repetitions of similar appearances reveal that all are parts of the same whole. Buildings in which there are very few, if any, forms alike, such as we find exemplified in

FIG. 69.—POUTOU TEMPLE, NINGPO, CHINA.
See pages 18, 124, 207, 264.

Fig. 67 in this chapter, Figs. 4, page 21, and 5, page 23, and 60, page 191, as well as in too many of those so popular in our own day, said to be erected in the style of Queen Anne, are not, whatever else they may be, works of art.

CHAPTER XIII.

MASSING OR BREADTH.

Connection between the Methods next on our List and those already Considered—Massing—Its Object is to Produce Cumulative or General Effects—In Poetry, by an Accumulation of the Effects of Sense and Sound—of Sound alone—Connection between Massing and Central-Point as Illustrated in the Climax—Massing in Music—In Painting: the Meaning of Breadth in this Art as Restricted to Effects of Light and Shade—Means Used by the Artist in Producing these—Not necessarily One Mass of Light in One Composition: Three Masses—Breadth and Massing Analogous—The same Principles Applied to Colors and Outlines—Massing in Sculpture—In Architecture: By Outlines and by Light and Shade.

AS was indicated in the list of the methods on page 131, *massing* is a further development in form of the same tendency that leads to *comparison*, *principality*, *congruity*, *central-point*, and *repetition*, and is usually connected with them; *interspersion* is similarly related to *contrast*, *subordination*, *incongruity*, *setting*, and *alteration*; *complication* is related to *counteraction*, *complement*, *comprehensiveness*, *parallelism*, and *alternation*; and *continuity* is related to *grouping*, *organic-form*, and *symmetry*.

Inasmuch as *massing* is the most important of the methods now to be considered, as well as because it must be treated at some length, what is to be said in this chapter will be confined to it. By the word itself, as also by *consistency*, which is used synonymously with it, artists mean the bringing together of repeated effects, so that in any given

composition those that are alike in one regard are in one place, and those that are alike in another regard are in another place. Thus defined, it is evident that, while an aid both to *principality* and *central-point*, *massing* is distinctly different from either. It may involve, and usually necessitates, a number of exactly similar features, which is not the case either when one of these has *principality* or when many are grouped in such a way as to be brought to a *central-point*. It is evident, too, that, as it has been defined, *massing* is a method that may be applied in art to the arrangements of other factors besides those of light and shade, to which it is sometimes limited. Whenever, for any reason, a large number of factors alike in one regard—if of sounds, in time, pitch, loudness, or quality; if of sights, in size, outline, color or light,—are separated from other factors, and crowded together by themselves, there we have massing.

Of course, its object, as thus explained, whether applied to a part or to a whole of the like factors of a composition, is to produce a cumulative or general effect—an effect which could not be produced by any or all of the factors if not used conjointly. All the methods, too, of which we have been treating have more or less influence in securing this result. But all of them together would fail of efficiency without *massing*. In fact, we might define this by saying that it is such a method of presenting details as to cause others to judge of them *en masse*. In the main, however, it emphasizes the features and the concepts represented in them in the same way and for the same reason as *repetition*, of which it is an intensified phase.

Poetic *massing* involves characteristics with which we are all familiar. Notice, in the following, how both sense

and sound contribute in a cumulative way to the general impression.

A plague upon them ! wherefore should I curse them ?
Would curses kill as doth the mandrake's groan,
I would invent as bitter-searching terms,
As curst, as harsh, and horrible to hear,
Delivered strongly through my fixéd teeth,
With full as many signs of deadly hate,
As lean faced envy in her loathsome cave ;
My tongue should stumble in mine earnest words ;
Mine eyes should sparkle like the beaten flint ;
My hair be fixed on end, as one distract ;
Ay, every joint should seem to curse and ban ;
And even now my burdened heart would break,
Should I not curse them. Poison be thy drink !
Gall, worse than gall the daintiest that they taste !
Their sweetest shade, a grove of cypress trees !
Their chiefest prospects, murdering basilisks !
Their softest touch, as smart as lizards' stings !
Their music frightful as the serpent's hiss !
And boding screech-owls make the concert full !

—*H. IV., Pt.* II., iii., 2 : *Shakespeare.*

In the following comical enumeration by Southey of the troubles assailing Napoleon on his return from Moscow, the same effect is produced almost exclusively by sounds.

The Russians they stuck close to him
All on the road from Moscow.
There was Tormazow and Jemalow,
And all the others that end in ow ;
Milarodovitch and Jaladovitch,
And Karatschkowitch,
And all the others that end in itch ;
Schamscheff, Souchosaneff,
And Schepaleff,
And all the others that end in eff ;
Wasiltschikoff, Kostomaroff,
And Tchoglokoff,
And all the others that end in off ;

Rajeffsky, and Novereffsky,
And Rieffsky,
And all the others that end in effsky:
Oscharoffsky and Rostoffsky,
And all the others that end in offsky;
And Platoff he played them off,
And Shouvaloff he shovelled them off,
And Markoff he marked them off,
And Krossnoff he crossed them off,
And Tuchkoff he touched them off,
And Boraskoff he bored them off,
And Kutousoff he cut them off,
And Parenzoff he pared them off,
And Worronzoff he worried them off,
And Doctoroff he doctored them off
And Rodionoff he flogged them off;
And last, of all, an admiral came,
A terrible man with a terrible name,
A name which you all know by sight very well,
But which no one can speak, and no one can spell.
They stuck close to Nap with all their might;
They were on the left and on the right,
Behind and before, and by day and by night;
He would rather parlez vous than fight;
But he looked white, and he looked blue,
Morbleu! Parbleu!
When parlez vous no more would do,
For they remembered Moscow.

—*The March to Moscow*: **Southey.**

Sometimes, in fact usually, where there is *massing*, there is also a climax, in which—as indicated on page 163,—everything is brought to a *central-point*, *e. g.*:

What a piece of work is man! How noble in reason! How infinite in faculties! In form and moving how express and admirable! In action how like an angel! In apprehension how like a god!

—*Hamlet*, ii., 2: *Shakespeare.*

In such cases, the analogy is complete between the effect of the *central expression* about which other expres-

sions are *massed* in poetry, and of the *centre of interest* about which color or light is *massed* in painting.

In music, *massing* fulfils functions equally important. It is this, as exemplified in the accumulations of the same notes, chords, or instruments, that enables us to recognize the peculiarities distinguishing passages that are loud or soft, forcible or light, gay or pathetic; while without it and its reiterated repetitions, the musical cadence or climax, as heard at the ends of compositions or of prominent movements, would produce little impression.

The terms *massing* and also *breadth*, which latter seems to indicate that which is the result of the former, are applied more commonly to effects in the arts that are seen than in those that are heard. But, as we said a moment ago, it sometimes seems to be supposed that both terms should be used to refer only to those effects of light and shade whereby bright features are put with bright, and dark with dark. As a result of such arrangements, a *breadth* of distance seems to separate the objects in light from those in shade, and a corresponding *breadth* of view seems to be afforded him who sees them; hence the term breadth sometimes applied to these effects. Light and shade cannot be discussed fully except in connection with color. But so far as their use illustrates massing, something needs to be said of them here; and that they do illustrate this, and are, therefore, in analogy with it as produced by other elements both of sight and sound, no better proof needs to be furnished than the statements that follow.

In securing the effects of *breadth*, the artist does not arbitrarily make objects bright or dim in order to have them correspond to the bright or dim parts of the picture in which he wishes to place them. He exercises in-

genuity in arranging his materials so as to bring into the right relations objects that in nature are bright or dim, or that can be made so in nature by the presence or absence of an illuminating agent. Besides this, too, he arranges the light so as to fall where it will prove most effective. In Titian's "Entombment," it is made to illumine a figure in the foreground, notwithstanding the fact that the sun is represented as setting in the background. The painter produces the effect by supposing the sun's rays to be reflected from a cloud in advance of the field of vision. Notice also what was said on page 72 of the way in which the light is massed by Rubens and Correggio, the one in the "Descent from the Cross" (Fig. 16, page 73, and the other in the "Holy Night," Fig. 70, page 215.

It is not to be supposed, however, that in any given picture, there may not be more than one place where there is light and one place where there are shadows, although in the paintings of Correggio and Rembrandt, who developed most fully the possibilities of light and shade, or of *chiaroscuro*, as it is called, this plan was usually followed. According to Reynolds (Note xxxix on "The Art of Painting"), there may be three masses of light, one of which, however, he would make more prominent than the other two, thus causing all three together to fulfil the methods both of *principality* and *balance*. Titian, in order to impress the fact that every picture representing the effects of the atmosphere must indicate not only the general influence of the light and shade on all the objects depicted considered together, but on each specific object considered by itself, is said to have pointed to a bunch of grapes; and shown how the bunch considered as a whole has a light and a dark side, and also how each grape considered by itself has a light and a dark side. The effects resulting from

FIG. 70.—THE HOLY NIGHT.—CORREGGIO.

See pages 16, 72, 80, 120, 190, 214, 257.

each of these conditions render the representation of both difficult. Nor can they be represented at all except in the degree in which the general effect, which is the one connected with *massing*, is treated as the more important of the two.

From what has been said, it is evident that the effect of *breadth*, as thus produced, is identical with that of the accumulation of repeated characteristics which results from *massing* in poetry and music. The artistic end in view, too, is the same. By it, the *unity*, *comparison*, *principality*, *congruity*, *central-point*, as well as *repetitions* of the product are all brought out more clearly. "Pictures," says S. P. Long in his "Art, Its Laws, and the Reasons for Them," Essay VI., "Pictures possessing breadth of the general light and dark or shade are not only very effective, but they likewise give great repose to the eye; whereas, where the lights and darks are in small portions, and much divided, the eye is disturbed and the mind rendered uneasy, especially if one is anxious to understand every object in a composition, as it is painful to the ear, if we are anxious to hear what is said in company, where many are talking at the same time. Hence . . . the reason why portraits make a more pleasing picture when but few objects are introduced into the composition than when the person is covered with frills and ruffles, and the background stuffed like a 'curiosity shop.' Such an arrangement cuts up the lights and darks and destroys the breadth"—a statement applicable, as will be noticed, not only to *massing* but also to *interspersion*, its opposite, which is to be considered in the next chapter. Concerning the same subject Ruskin says in his "Elements of Drawing," Letter III.: "Such compositions possess higher sublimity than those which are more mingled in

their elements. They tell a special tale and summon a definite state of feeling. We have not in each gray color set against sombre, and sharp forms against sharp, and low passages against low; but we have the bright picture with its single ray of relief; the stern picture with only one tender group of lines; the soft and calm picture with only one rock angle at its flank, and so on."

So much for the effects of *massing* as produced by arrangements of light and shade. Now in what do we find an analogy for this method as produced by colors or outlines? As applied to colors, the question hardly needs an answer. In any picture not delineated in white and black, light and shade are themselves represented by colors, and the light colors necessarily go with the one and the dark with the other. But how is it with outlines? Suppose that a picture is composed of human figures. If certain of these be grouped together, though only through the use of outlines, so as to emphasize their sizes, attitudes, and, because in the foreground, their relative influence as compared with the rest of the composition, will they not, irrespective of any effects of light or color, attract attention and, very likely, absorb it? And in recalling the picture, shall we not necessarily think chiefly of these figures and of the thoughts that they represent, rather than of anything else connected with it? But is not this effect produced by the massing of outlines identical with that produced by the massing of light in breadth? See the figures of the gladiator and his antagonist, in Gérôme's "Pollice Verso," Fig. 26, page 81.

With such a conception of *massing*, as produced by means of outline, we can see how it may be used in sculpture; and how, when so used, it may concentrate attention upon, say, the human figures or parts of them that

are represented, rather than upon the drapery or pedestal, or any architectural forms surrounding them. Certain kinds of sculpture, too, especially the bas-relief, afford the same possibilities for effects of light and shade, and therefore of breadth, as produced by these, that painting does. See an illustration of massing produced in both ways in the "Mithras Stabbing the Bull," Fig. 54, page 179.

FIG. 71.—GATE OF THE PALACE, NANCY.
See pages 76, 219.

In architecture, we have an exact analogy to the effects of *massing* in some of the older castles and even churches of Europe, where all the decoration connected with the forms is concentrated about a tower, or gateway, or door, or all of these together, on each side of which is merely a wall entirely blank or pierced with non-ornamental openings.

See the "Gateway of the Palace at Nancy," Fig. 71, page 218. What could more closely resemble the impression produced by some of Rembrandt's pictures with their blaze of light in the centre and their gloom of shadow surrounding it? Besides this, in architecture as in sculpture, there is an opportunity for *massing* as produced by light and shade. "I do not believe," says Ruskin, in his "Seven Lamps of Architecture," chap. iii., "that ever any building was truly great unless it had mighty masses, vigorous and deep, of shadow mingled with its surface. And among the first habits that a young architect should learn is that of thinking in shadow, not looking at a design in its miserable liney skeleton, but conceiving it as it will be when dawn lights on it, and the dusk leaves it. . . . All that he has to do must be done by spaces of light and darkness; and his business is to see that the one is broad and bold enough not to be swallowed up by twilight, and the other deep enough not to be dried like a shallow pool by a noon-day sun."

CHAPTER XIV.

INTERSPERSION, COMPLICATION, AND CONTINUITY.

Interspersion in Nature and Art—Complication in Nature and Art—Its Relation to Order—Continuity—Should not Disregard the Requirements of Variety — Illustrations — Interspersion, and Complication in Poetry—In the Sense—Interspersion in the Form—Variety without Interspersion—Complication in the Form—Continuity and Drift—Interspersion, Complication, and Continuity in Music—The Two Former in Painting, Sculpture, and Architecture—Continuity in these Latter Arts —Present in Connection with Interspersion and Complication.

FROM what has been said, the close connection between *massing* and both *principality* and *central-point* is at once apparent. It is apparent also that, if there be no massing at all in an art-work; in other words, if like features be not grouped together but scattered, so that the like are *interspersed* with the unlike in almost equal quantities, then the main object of composition, which is to reduce factors to *unity* and *order*, so as to render them æsthetically intelligible, is not accomplished. At the same time, *interspersion*, like *variety* and *confusion* and their kindred methods, is one of the characteristics of nature; and because of this, and because it clearly contrasts with such effects as are most distinctively artistic, it always gives some suggestion of naturalness to a product in which it appears. Loosely constructed sentences and whole compositions, like Emerson's "Essays," say, as contrasted with Everett's "Orations"; or like Crabb's

"Parish Register" as contrasted with Milton's "Paradise Lost"; or like Sullivan's "Patience" as contrasted with Wagner's "Tannhauser"; or like almost any Nocturne as contrasted with a March, or Variation as contrasted with a Symphony—all the former of these, owing to the way in which, in the absence of cumulative or massing methods, unforetokened and unexpected effects are *interspersed*

FIG. 72.—CHATEAU AT MONTIGNY.
See pages 31, 37, 77, 78, 124, 222, 235, 251.

throughout, have a peculiar charm of their own. So in the arts of sight, the blending of all sorts of forms, natural and human, in hill and valley, foliage and rock, land and water, or shade and sunshine, robed, as in some paintings, in all possible colors, and mixed, as in some architecture, like that characterizing the street fronts of certain American cities, or the diversified roofs and tur-

rets of certain villas—these too, presenting what we term a *picturesque* effect, owe their main attractiveness to *interspersion.*

Always in connection with this effect, however, there needs to be, as in the "Landscape with Water," by Corot, Fig. 73, page 223, a liberal application of certain of the other methods of composition; elsewise the result is not æsthetically satisfactory. For instance, in the "Chateau at Montigny," Fig. 72, page 221, we have *interspersion*, but it is modified so little by other counteracting effects that, as a whole, the building has no *unity.* It is picturesque, but this is all that can be said in its favor. When a certain degree of *massing* is joined with *interspersion* so as to cause the interspersed quantities or qualities to reappear at approximately regular intervals, in ways according with *complement*, *counteraction*, *balance*, *parallelism*, and *alternation*, we have what is understood by the term *complication.* This word, like *parallelism*, *continuity*, and many others used in art, is borrowed from one indicating relationships of lines. It means a folding or blending together primarily of these, but, secondarily, of any forms. Evidently, too, it involves, like *massing*, the presence in large quantities of the features to which it is applied. In fact, the greater the number of themes or phrases, say, in a symphony, the more complicated, as a rule, are its movements; and the greater the number of trees or rocks in a landscape, the more complicated, as a rule, are the factors composing it.

But while this is true, these factors, if complicated in an artistic manner, may always be presented in a certain *order.* We shall recognize this by recalling many of the patterns of our carpets and wall-papers, imitated or modelled after those of the Orientals. (See Fig. 74, page

FIG. 73.—LANDSCAPE WITH WATER.—COROT.

See pages 118, 156, 172, 174, 222, 234.

225, also Fig. 9, page 38). "When," says Charles Blanc, in his "Art in Ornament and Dress," "the surface ornamented according to Arabian taste has no dominant subject indicated by its isolation or by its color, the spectator has only before him an assemblage regularly confused of triangles, lozenges, wheels, half-moons, trefoils, imperfect pentagons, and unfinished meanders, which penetrate, intersect, balance, and correspond to each other, approach to retreat, and touch one moment to depart the next, and dissolve themselves in a labyrinth without outlet and without end. The Arabs have thus realized the strange phenomenon which consists in producing an apparent disorder by means of the most rigid order."

If we allow any single feature entering into *complication* —one of its lines, say—to be interrupted, as it must be wherever an application of the method of *interspersion* causes another line to cross it, or another feature to take its place; that which conveys to us an impression of *unity* notwithstanding *interspersion* is the reappearance of the line or feature that has disappeared. This necessitates *continuity*,—a term that, primarily, signifies a line, whether straight or curved, which is continuous. But, secondarily, it signifies any kind of sound, color, or figure that is continuous. It means, therefore, any kind of continuous repetition or massing. *Continuity* is that which makes a composition which begins in one way, either in time or space, keep on in the same way to its end. Just as *symmetry* tends to cause all parts of an outlined form to be equally balanced about a common centre, *continuity* tends to cause them all to be equally connected with a common mass or materiality.

As both *symmetry* and *continuity*, however, must, like all the other art-methods, exist in connection with some

FIG. 74.—A WINDOW IN THE ALHAMBRA.

See pages 37, 222, 236.

variety, neither should be absolutely perfect. *Continuity* of *repetition* and *massing* would, indeed, give *unity*, and this is the most important element of art-form; but unity follows more clearly the laws of nature, and therefore of art, in cases where it is slightly opposed by the tendencies underlying *interspersion* and *complication*.

FIG. 75.—SCULPTURED GROUP OF THE LAOCOÖN.
See pages 120, 182 204, 235, 238.

For this reason, without doubt, artists have a rule that, in the use of lines involving, in the ways just indicated, an application of the method of *continuity*, care should be taken to have them not absolutely continuous, but interrupted at intervals, and then, if necessary, caught up and extended further on. If absolutely continuous, they suggest degrees of mathematical exactness and of monotony inconsistent with a reproduction of the effects of nature. A landscape in which paths or trees or bridges are arranged in uninterrupted rows as geometrically regular as the threads of a spider's web, seems to be in the highest degree unnatural. Even though a literal copy of some park in actual existence, we feel like blaming the artist for not choosing to copy a scene giving

more evidences of nature as God left it. In this, we should usually find places where lawns, bushes, forests, rivers, hills, or other paths, trees, or hedges crossed or stopped the straight lines, or made them bend away in other directions. So with painters' lines in figures or in buildings—they are seldom unbroken. Even in places

FIG. 76.—SOUTH AISLE OF WINCHESTER CATHEDRAL, ENGLAND.

See page 240.

where they are expected to be so, the interruption occasioned by folds of drapery about the human body, or by the trailing of a vine about the pillars of a porch or edges of a tower, usually suggests a touch of nature that redeems the effect from artificiality.

Now let us notice the applications of these principles; and, first, to poetry. All literary works that have occult and intricately developed plots manifest, of course, more or less of *complication* and a tendency to *interspersion*. The important matter, in such cases, is to have one aim so running through and pervading the parts that all can be recognised to have *continuity*. The following passage will serve to illustrate how this can be done. Every thought expressed in it, as well as every expression, continues the general idea; yet it does this, as will be observed, in connection with many different thoughts and expressions that are not massed, but *interspersed* and *complicated*. Like this, too, in these regards is the quotation from "King Lear" on page 138.

Lodovico. Is there division 'twixt my lord and Cassio?
Desdemona. A most unhappy one: I would do much
T' atone them for the love I bear to Cassio.
Othello. Fire and brimstone!
Desdemona. My lord?
Othello. Are you wise?
Desdemona. What, is he angry?
Lodovico. May be the letter moved him,
For I think they do command him home,
Deputing Cassio in his government.
Desdemona. Trust me, I am glad of it.
Othello. Indeed?
Desdemona. My lord?
Othello. I am glad to see you mad!
Desdemona. How, sweet Othello?
Othello. Devil! (*Striking her.*
Desdemona. I have not deserved this.
Lodovico. My lord, this would not be believed in Venice,
Though I should swear I saw it. 'T is very much.
Make her amends; she weeps.
Othello. O devil! devil!
If that the earth could teem with woman's tears,

Each drop she falls would prove a crocodile.
Out of my sight !
Desdemona. I will not stay to offend you.
Lodovico. Truly an obedient lady.
I do beseech your lordship call her back.
Othello. Mistress !
Desdemona. My lord ?
Othello. What would you have with her, sir ?
Lodovico. Who, I, my lord ?
Othello. Ay ; you did wish that I would make her turn.
Sir, she can turn, and turn, and yet go on,
And turn again ; and she can weep, sir, weep ;
And she 's obedient as you say—obedient—
Very obedient. Proceed you in your tears.—
Concerning this, sir—O well painted passion !
—*Othello*, iv., 1 : *Shakespeare.*

In this next example, we have *interspersion* and *complication* in the thought ; by which is meant a *confused* effect owing to the blending, and in the same sentence too, of plain and figurative language, as well as of different figures.

Then with a skip as it were from heel to head,
Leaving yourselves fill up the middle bulk
O' the trial, reconstruct its shape august,
From such exordium clap we to the close ;
Give you, if we dare wing to such a height,
The absolute glory in some full-grown speech
On the other side, some finished butterfly,
Some breathing diamond-flake with leaf-gold fans,
That takes the air, no trace of worm it was,
Or cabbage-bed it had production from.
—*Ring and Book : R. Browning.*

And here we have *interspersion* in the form, because in it the requirements of no one order of sequence of syllables or of rhythm are fulfilled :

But Italy, my Italy,
Can it last, this gleam ?
Can she live and be strong,

Or is it another dream
Like the rest we have dreamed so long?
And shall it be, must it be,
That after the battle cloud has broken
She will die off again
Like the rain,
Or like a poet's song
Sung of her sad at the end
Because her name is Italy—
Die and count no friend?
—*Napoleon III., in Italy: E. B. Browning.*

There is equal variety in the following, but no *interspersion.* All is in the same rhythm.

All 's done,
All 's won,
Never under the sun
Was shirt so late finished, so early begun.
The work would defy
The most critical eye.
It was bleached—it was washed—it was hung out to dry—
It was marked on the tail with a T and an I.
On the back of a chair it
Was placed just to air it,
In front of the fire.—Tom to-morrow shall wear it.
Occca mens hominum.—Fanny, good soul,
Left her charge for one moment—but one; a vile coal
Bounced out from the grate and set fire to the whole.
—*A Legend of a Shirt: R. H. Barham.*

It would not be altogether unjustifiable to take this last quotation for an example of *complication* in poetic form; but the following will serve our purpose better. Would it be possible to represent more effectively in a form appealing to the ear that blending and twisting of lines which is the first suggestion given by the word *complication?* Notice how in these one line disappears, while other lines cross it, and then reappears:

Here we are riding the rail,
  Gliding from out of the station ;
Man though I am, I am pale,
  Certain of heat and vexation.

Gliding from out of the station,
  Out from the city we thrust ;
Certain of heat and vexation,
  Sure to be covered with dust.

Out from the city we thrust :
  Rattling we run o'er the bridges ;
Sure to be covered with dust,
  Stung by a thousand of midges.

Rattling we dash o'er the bridges,
  Rushing we dash o'er the plain ;
Stung by a thousand of midges,
  Certain precursors of rain.

Rushing we dash o'er the plain,
  Watching the clouds darkly lowering,
Certain precursors of rain,
  Fields about here need a showering.
—*From En Route, A Pantoum : Brander Matthews.*

Beautiful, distracting Hetty,
  This was how it came to be
As we strolled upon the jetty.

I had danced three times with Netty,
  She had flirted with Dobree,
Beautiful, distracting Hetty.

I was humming Donizetti,
  Hurt was I and angry she,
As we strolled upon the jetty.

As she levelled her Negretti
  With provoking nicety,
Beautiful, distracting Hetty,

Suddenly she flashed a pretty,
Half-defiant glance at me,
As we strolled upon the jetty.

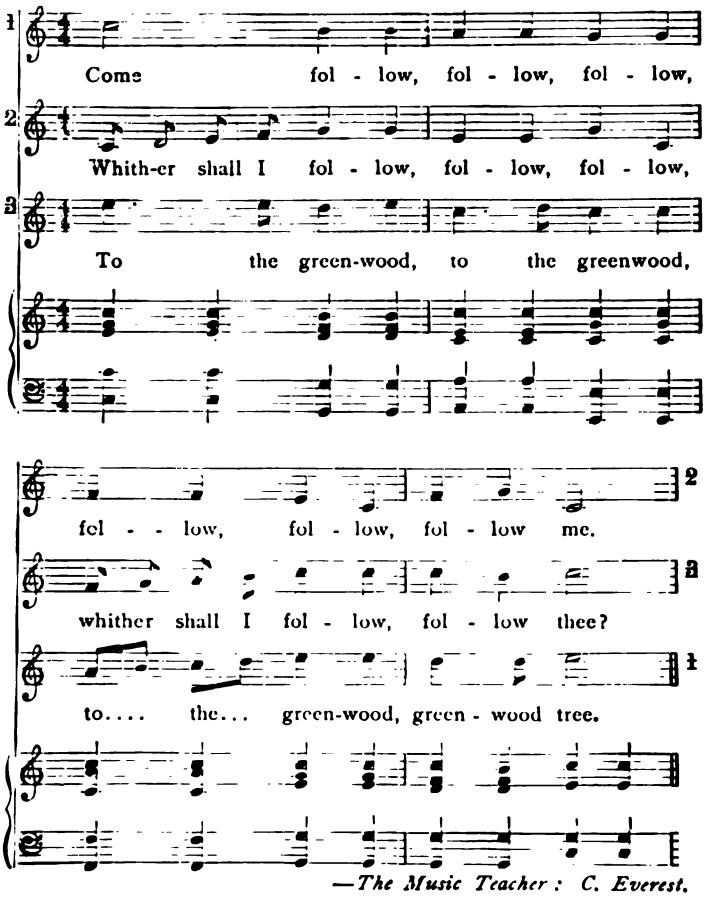
And our quarrel seemed so petty
By the grandeur of the sea:
Beautiful, distracting Hetty,
As we strolled upon the jetty.

Villanelle: Cosmo Monkhouse.

Considered in itself, *continuity*, as used in any of the arts of sound, is the same as that which in oratory is termed *drift*. This is a result produced partly by the consecutive character of the thought, and partly by the gliding regularity of an even, unhesitating flow of words in a rhythm constantly exciting and satisfying expectation, and suggesting no possible interruption of the process. For examples of this kind of poetic continuity, as well as for the distinction that needs to be made between it and progress, see page 276.

In music the gradual as well as the sudden interruption of movements by contrasting strains, testifies that *interspersion* is a legitimate effect. Of the comic opera, in fact, it is one of the chief effects. Nor can any one who has ever listened for the methods underlying the changes in the melody and harmony of a symphony, or of any composition of a high order, fail to recognize in it the almost constant presence of *complication*. As a historic fact, the whole system of harmony now in vogue in Europe sprang from an effort to sing at one and the same time several different melodies, as in the following "Round" or "Cannon." As most of us know, this is so composed that when one voice, which has sung through the first line, begins the second line, a second voice begins the first; and when the first voice begins the third line, a third begins the first;

and all three voices continue for some time repeating the three lines in succession.



—The Music Teacher : C. Everest.

A glance at this will reveal that the melodies move above, below, and about each other with effects corresponding exactly to those of lines twisting and intersecting in *com-*

plication. At the same time, as the laws of harmony are understood to-day, unless, in the greater number of the parts of a composition, some theme is developed with such a consistent and consecutive flow of notes and chords that they fulfil the requirements of what has here been termed *continuity*, the product is not an artistic success. Like an oration devoid of drift, it fails to enchain the attention.

FIG. 77.—INTERIOR OF ST. LOO CATHEDRAL, FRANCE.

See page 240.

All these methods have a place in the arts appealing to the eye. Reference has been made already to effects of *interspersion*, popularly called the *picturesque*, produced in painting by a scattering of hills and vales, trees and plains, rocks and flowers, land and water, light and shade, and colors of all possible hues. Corot's "Landscape with Water," Fig. 73, page 223, illustrates this effect as applied to the use of outlines.

As applied to that of color, it cannot well be illustrated, of course, in pages where there is no color; but it can be represented sufficiently to imagination by recalling the familiar effect termed checkered, whether produced by different dyes in fabrics, or by sunshine and shadow in external nature. Both *interspersion* and *complication*, but mainly the latter, are apparent in the outlines of arms and limbs in the "Descent from the Cross," Fig. 16, page 73, and in the "Laocoön," Fig. 75, page 226. As manifested in a building as a whole, interspersion was sufficiently exemplified in Fig. 72, page 221, already noticed. But in architecture, and in sculpture as a means of ornament-

FIG. 78.—INTERIOR OF BEVERLEY MINSTER, ENGLAND.

See pages 238, 241, 264.

ing architecture, a special form of it, usually connected with *complication*, too, and to the phase of this to which we apply the term most distinctively and technically, may

FIG. 79.—INTERIOR OF EXETER CATHEDRAL, ENGLAND.
See pages 238, 241, 264.

be noticed in the "Window of the Alhambra," Fig. 74, page 225. Complication, as thus illustrated, is a method as old as the time when Dædalus planned his labyrinth,

FIG. 80.—CHURCH OF ST. HILAIRE, ROUEN, FRANCE.

See pages 124, 241, 251.

Solomon his mysterious seal, and the Moors and builders of Christian cathedrals their interlaced ornaments, mosaics, and intersections of ribs and arches. See Figs. 69, page 208, 79, page 236, and 96, page 290.

The idea to be held in mind in connection with *continuity* is that it is an element of *unity*. So if in a foreground, for instance, there be a row or group of trees stretching backward interrupted by a plain, it is well if, farther back, the same line of direction be carried on, if

FIG. 81.—FRONT ELEVATION.
See pages 124, 241, 251.

FIG. 82.—SIDE ELEVATION.
See page 241.

not by trees, then, say, by a river, and still farther in the extreme distance, by the side of a hill or by a path upon this hill. See the way in which such lines are continued across the entire canvas in Turner's "Decline of Carthage," Fig. 51, page 175, and in Corot's "Canal," Fig. 47, page 157. Similar arrangements can characterize figures as represented in either painting or sculpture. Notice this in the directions taken by the different limbs of the figures in the "Laocoön," Fig. 75, page 226. Also in the lines

entering into both human figures and their surroundings in Figs. 26, page 81, and 55, page 181. In this way, also, as will be observed by glancing again at these illustrations, *continuity* contributes to the effects of *central-point* and *parallelism* considered in Chapters X. and XI., all the methods of art, as has been said before, being necessarily connected.

But to turn to architecture. Every one must have observed that, as a rule, we derive more satisfaction from a building in which the window-caps in the same story and the window-sides in all the stories, form together one, often interrupted, but yet continuous line. And so too with the lines in groined ceilings. Observe how inartistic

FIG. 83.—TOWER OF BORIS, KREMLIN, MOSCOW.

See page 241.

is the effect of the ceiling of the south aisle of "Winchester Cathedral," Fig. 76, page 227. This is so because the arches, having been constructed at different times and

FIG. 84.—DOME OF CHIAVAVALLE, IN ITALY.
See page 241.

in different styles, meet in different ways and at different places, with the result of suggesting an entire lack of continuity. The ceiling of "St. Loo Cathedral," Fig. 77,

page 234, is better, in that, while it lacks continuity, it does not render it an impossibility. But notice how much more satisfactory is the ceiling of "Beverley Minster," Fig. 78, page 235, in which, carrying the eye backward to the altar, *continuity* is distinctly suggested; and also that in "Exeter Cathedral," Fig. 79, page 236, in which the central line of the ceiling is itself continuous. A similar truth may be observed in the lines forming the general contours of gables, roofs, and towers. Observe how many lines connected with how many different architectural features—lines horizontal, perpendicular, diagonal—give continuity to the front of the church in Rouen, Fig. 80, page 237. So too with the diagonal side-lines on the roof and the towers in the "Elevations," the work of G. H. Edbrooke, Figs. 81 and 82, page 238. Notice also the continuity of the lines forming the general contour of the sides of Fig. 69, page 208, and Fig. 83, page 239, and compare with the effects of these, the lack of continuity, and consequently of grace and beauty, in the lines forming the general contour of the sides of the "Dome of Chiavavalle, Italy," Fig. 84, page 240. If it be asked why, in such cases, we prefer to see one line, or series of lines, point to another or others, and thus continue the first's effects, the answer is because such arrangements, with their suggestions of *order* and *unity*, convey an impression of design, and design is the chief element of art, and, in a presumably artistic product, that which conveys this impression is necessarily the most æsthetically satisfactory.

It is not strange then, that, in whatever art either *interspersion* or *complication* exists, it seems to be an established principle that neither should be used, as a rule, except in connection with something sufficiently *suggestive* of *continuity* to convey the impression that like has been

put with like. A consciousness of this fact undoubtedly influenced Raphael and Kaulbach, the former in the "School of Athens," Fig. 10, p. 41, and the latter in the "Reformation," to frame the otherwise confused groups of figures within the strongly symmetrical architectural outlines in the one case of a porch, and in the other of a church. Thus these artists by suggesting *continuity*, through arrangements of walls and pillars and ceilings, *counteracted confusion* and produced effects of *unity* and *order*. The same is also done through the influence of the general outlines indicated by the windows and entrances, buttresses and towers and arches and groinings used in connection with the *complicated* forms not only of Gothic, as has been mainly indicated here, but of all architecture.

CHAPTER XV.

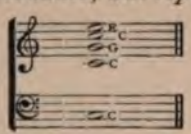
CONSONANCE, DISSONANCE, AND INTERCHANGE.

The Musical Meaning of the Term Shows it Allied to the Congruous—Also to the Repetitious—How the same Meaning Attaches to the Word as Used in other Arts—Three Ways in which Features Seemingly alike may Differ: in Size—In Combination—In Material—Consonance and the Law of Help—Dissonance—Why Involved in Passing from one Key to Another—Why it has Artistic Value—Interchange—Why Necessary to Harmony in Music—In Color and Outline—Poetic Consonance—Dissonance—Harmonizing of the two—Musical Consonance—Dissonance—Consonance in Color in Connection with Difference in Texture—Value—Tone—Consonance not Harmony—Nor is Dissonance Contrast—The Same Methods in Outline—In Painting and Architecture—Neglect of them in Architecture—Illustrations—Results—Importance of Harmony thus Produced—Which is not Inconsistent with some Dissonance.

IT was said in Chapter VIII. that *consonant* effects seem alike not merely because, as in *congruity*, they are associated in thought, nor merely because, as in *repetition*, they are alike in actual form. They seem alike, in part, because of one of these reasons, and, in part, because of the other. In music, from which the term *consonance* is taken, those tones are said to manifest this, which, when produced by unaided nature or by man experimenting with the results of nature, appear to be what we term *in harmony*. One reason, therefore, why men use the tones together in art is because they go together in nature, and so are recognized to be *congruous*.

But this is not the only reason. When we study the question more closely and ask why they are harmonious, we find the answer to be because, in a sense, they are also *repetitious*. This is not the place in which to detail the various experiments through which this fact has been ascertained. Among other methods, through the use of resonators, so constructed as to enable one to detect the presence in a tone of any particular pitch, it has been fully proved that notes which are consonant are such as contain the same elements of pitch, or—what is the same thing—are notes in which sounds of the same pitch are *repeated*. For instance, when a string like that of a bass viol is struck, its note, if musical, is not single or simple: it is compounded. Suppose that it produce the tone of the bass C — representing a sound-wave caused by the whole length of the string. This C is the main, or, as it is termed, the *prime* tone that we hear. But, at the same time, this same string usually divides at the middle, producing what is called a *partial* tone of the C above the bass, representing a sound-wave caused by one half the string's length. It often produces, too, *partial* tones of the G above this, of the C above this, and of the E above the last C representing sound-waves,caused, respectively, by one third, one fourth, and one fifth of the string's length. All the possible partial tones are not, in every instrument, invariably compounded with every prime tone, but whatever partial tones are present, the musical law is that the pitch of these, as a rule, is the same as the pitch of notes that are consonant with their prime tone. In other words, these notes, as in the cases of the C, C, G, C, and E in the music below, are consonant with each other, because they *repeat* in part sounds that already enter into each other's composition.

If now, bearing in mind that it is with the relations of form that art always has to deal, we apply the principle involved in *consonance* to other arts than those of sound, we shall have little difficulty in detecting what is meant by it. It is an effect of likeness, in part, of that which forms suggest to thought, and, in part, of that which they appear to be; or, as we might say, of likeness in the one because of likeness in the other. The latter, the likeness in appearance, however, is never complete. If it were, we should call it, not *consonance*, but *repetition.*



Three principal ways will reveal themselves, when we think of it, in which features that appear to be alike may nevertheless differ: namely, in *size*, in *combination* and in *material.* The lower *do* of a soprano voice may be said to differ in size from the consonant lower *do* of a tenor, an octave below it, in the same key. One unacquainted with music might not suppose that the two differed at all; yet the sound-waves causing the one are proportionally smaller, and move twice as rapidly as those causing the other. In the same way, various tints or shades, if alike in hue, may be consonant, though, as influenced by sunshine or shadow, they may differ greatly in the degree or amount —which, in this case, corresponds to size—of the coloring which they manifest. So, too, the arches of a gable or doorway and of a window may be consonant because the same in form, though in size they may differ greatly.

Again, the *do* of a scale (C in the music above) may be said to differ in *combination* from the consonant *mi* or *sol* (E or G in the music above) of the same scale, that which

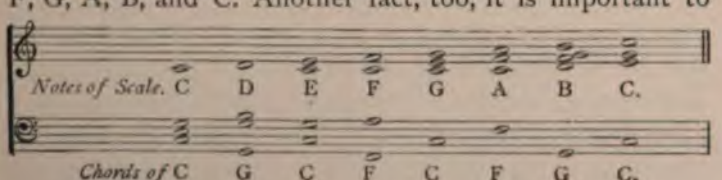
is a *partial* tone in the one, being a *prime* tone in the other. Precisely similar conditions characterize the consonance of effects produced by color, where in two or more places exactly the same hues are used, but in different proportions and quantities. The same conditions are equally manifested in the accumulations of narrow and wide and long and round windows, all, nevertheless, partly repetitious, that we find in a single consistent style of architecture.

Once more, the consonant notes may be sounded on various instruments—flutes, violins, or trumpets, as the case may be—and here there may be said to be a difference in *material*. As manifested in color, this evidently leads to that method of painting all objects in a picture or a part of it, no matter of what material they may be supposed to be composed—rocks, lakes, skies, or human clothing or flesh—in the same general hue, producing the effect of *tone* as it is called, illustrations of which will be mentioned on pages 255 and 256.

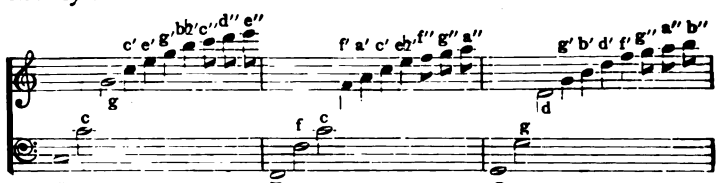
As manifested in outlines, *consonance*, in connection with difference in material, operates in the same way as that which Ruskin in the fifth book of his "Modern Painters" terms "The Law of Help." This he illustrates by referring to Turner's picture called "The Loire Side." "The flatness of the stone," he says, "prepares the eye to understand the flatness of the river. Further, hide with your finger the little ring on that stone, and you will find the river has stopped flowing. That ring is to repeat the curved lines of the river-bank which express its line of current, and to bring the feeling of them down to us. On the other side of the road, the horizontal lines are taken up again by the dark pieces of wood." Such effects as these may evidently be included under the term *conso-*

nance. What does this word mean but sounding together? telling the same story? conveying the same impression? The artistic feature in this picture causing objects as different essentially as stone, water, roads, and woods to help each other by way of suggestion, is the fact that while not alike in *material* they are, nevertheless, made to have like effects both upon thought and in the form.

Enough has been said to enable the reader to understand in a general way what is meant by *consonance*, and in what sense it can characterize products in all the arts. In order to indicate the connections between it and *dissonance* and *interchange*, let us go back for a moment to the use of the term in music. It has been said that certain notes are consonant because they are compounded of the same tones. Therefore, we strike a low C and a high C, G, and E, and call all, when sounded together, a chord. But notes and chords, too, may be consonant with others that also precede and follow them. A chord composed of C, G, and E may thus be consonant with one composed of G, D, and B, because G after the octave C, is the nearest partial of C; and it may be consonant, too, with one composed of F, C, and A, because after the octave F, C is the nearest partial of F. The two latter chords, therefore, are the ones most nearly related to the chord of C. But, besides this, notice that all these chords together contain all the notes of that musical scale which begins, or has its key-note in C natural,—namely, C, D, E, F, G, A, B, and C. Another fact, too, it is important to



notice here. This is, that there are some musical instruments in which when a C is sounded, not only another C or G or E is heard, but also above them other partial tones. The tones of this character which, in different instruments, have been detected as entering into the composition of C, F, and G, are as follows, those nearest the bass being heard, of course, much the more prominently and commonly:



Partial Tones of C. *Of F.* *Of G.*

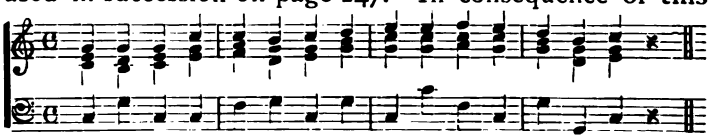
A slight examination of these possible partial tones will furnish us with another reason why all the notes of a single scale and the chords that harmonize them are consonant. These notes all enter into the composition of the major chords most nearly related to the chord of their key-note, and they also enter, either directly or indirectly, into the composition of their key-note itself. This being so, it is evident that if we pass from the scale of one key-note, or, as is said, from one key to another; for instance, from that of C natural to that of D flat, which is the half-note next above C natural (notice music on page 275), all these conditions are changed. Not one of the chords of the key of C natural is consonant with D flat itself, and, accordingly, it is evident that before we can proceed far in the new key all the relations of note to note and chord to chord must be changed. This change cannot take place without the ears detecting that the strain which follows is not consonant with that which

precedes; in other words, without their detecting the presence of *dissonance*. See the music on page 275.

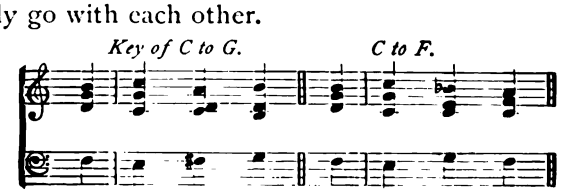
Dissonance, however, is not a wholly disagreeable feature. In fact, as everyone acquainted with music knows, there is a distinct pleasure attaching to the occasional use of it, as, for instance, in the chord of the seventh, an illustration of which may be noticed in the chord next to the last in the music on page 247. One reason for the pleasure is that *consonance* has a tendency to become monotonous. *Dissonance counteracts* it by introducing into the composition an element of *variety*. Another reason, closely connected with this, is that by means of *dissonance* chords pass, as has been said, from one key to another, thus rendering progress possible, which of itself enhances the listener's interest. The same principle is true as applied to outline and color. The *variety* imparted by *dissonance*, as long as it is kept *subordinate*, so as not to interfere with the general effect of *unity*, always has artistic value.

In the external world, the blending of some *dissonant* characteristics with a decided preponderance of *consonance*, constitutes what is termed the harmony of nature. The same is true of that of art. Tones, colors, and outlines that are consonant do not need to be harmonized. They harmonize naturally. The laws of harmony have to do mainly, therefore, with the methods of bringing together factors that are not consonant. The way in which this is done involves *gradation*, *abruptness*, and *transition*, all to be considered in the next chapter. At present we have to deal with cases in which the effects of *dissonance* are not removed, but are allowed to be present, and yet are overcome, as by *counteraction* where there is existing *confusion*. That which overcomes *dissonance* is an application in music of a

method identical with what in the arts of sight is termed *interchange*. The application is a very natural one to be made. It is merely a modification of a common musical principle, in accordance with which, in passing from one chord to another, one of the notes in both chords is made to be the same. Notice how this method is exemplified in all but one chord of the following, copied from Theodore Baker's translation of Ludwig Bussler's "Elementary Harmony." Compare with these the chords also used in succession on page 247. In consequence of this

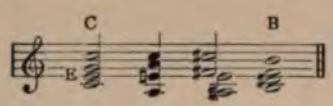


arrangement, made in exact conformity to the principles unfolded in this book, like is put with like in, at least, one regard, and the ear, recognizing this fact, feels that, notwithstanding their differences, and sometimes, as in the following, a passage to an entirely new key, the chords rightly go with each other.



Now it is often the case that, by a special application of this principle, the musician, without using all the chords necessary to connect keys according to the methods of complete harmonic *gradation* or *transition*, can establish a connection sufficient for the purpose by *interchange*. To do this, he introduces into a chord of the key in which the music is moving a note that belongs only to a chord in another key. In this way he prepares the ear

for this other key. Notice the E natural introduced thus into the second chord of the following:



In a corresponding way, of course, a note that really belongs only to a chord in a first key may be used in a chord belonging only to a second, which is thus connected with the one that precedes it.

This effect, which is very common in music, is exactly paralleled by *interchange* of color and outline in the arts that are seen. Thus in Titian's "Bacchus and Ariadne," a red scarf is given to Ariadne whose form stands out against the blue of the sky, while blue drapery clothes a nymph depicted amid red-brown colors underneath; and the painter has been much praised for this method of producing harmony. A similar effect is sometimes seen in buildings, in which, notwithstanding variety in the pitch of the window-caps of different stories, the feeling of unity is preserved by an occasional suggestion, in the subordinate features of the lower stories, of a sharper pitch in the upper, or *vice versa*. See Figs. 72, 80, 81, pp. 221, 237, 238.

Now for illustrations of these methods in the products of the different arts. In poetry it is difficult for some to separate elements of form from those of thought. But, as will be shown in another volume, there is a scientific appropriateness in applying the terms just used to verse. Here it will be sufficient to indicate their superficial appropriateness. The following lines are harmonious in a high degree, and this on account of the *consonance* produced by the likeness between associated sounds, not only in rhythms and rhymes but in the alliteration or

assonance of consecutive consonants or vowels. It is hardly necessary to point out that in the alliterative repetition of the l in the first three accented words, as well as in other analogous cases, we have what exactly corresponds to *interchange*, as exemplified above in the use of the same notes in consecutive musical chords.

Blessed of all men living that he found
  Her weak limbs bared and bound,
And in his arms and in his bosom bore,
  And as a garment wore
Her weight of want and as a royal dress
  Put on her weariness,
As in faith's hoariest histories men read
  The strong man bore at need,
Thro' roaring rapids, when all heaven was wild,
  The likeness of a child.

—*A Song of Italy*: *Swinburne.*

The following, as befits the thought expressed, is highly inharmonious, containing too little of rhythm, alliteration, or assonance to produce, so far as concerns the form, any effect of unity. All is *dissonance.*

May you a better feat never behold
You knot of mouth-friends! Smoke and lukewarm water
Is your perfection. This is Timon's,
Who struck and spangled you in your faces
Your reeking villainy. Live loathed and long,
Most smiling, smooth, detested parasites.
Courteous destroyers, affable wolves, meek bears,
You fools of fortune, trencher-friends, time's flies,
Cap-and-knee slaves, vapors and minute-jacks!
Of man and heart the infinite malady
Crust you quite o'er.

—*Timon of Athens*, ii., 6 : *Shakespeare.*

In the following we have some decided *dissonance*, as in the second, sixth, fourteenth, and sixteenth lines, but, on the whole, everything is welded together so as to produce a general effect of *harmony*.

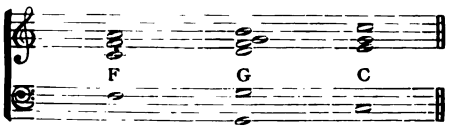
Thither winged with speed
A numerous brigade hastened ; as when bands
Of pioneers, with spade and pickaxe armed
Forerun the royal camp to trench a field
Or cast a rampart. Mammon led them on,
Mammon, the least erected spirit that fell
From heaven ; for e'en in heaven his looks and thoughts
Were always downward bent, admiring more
The riches of heaven's pavement, trodden gold,
Than aught divine or holy else enjoyed
In vision beatific. By him first
Men also and by his suggestion taught
Ransacked the centre, and with impious hands
Rifled the bowels of their mother earth
For treasures better hid. Soon had his crew
Opened into the hill a spacious wound
And digged out ribs of gold.

—*Paradise Lost, i. : Milton.*

Consonance in music is most nearly perfect in the degree in which all the notes that are sounded together in a chord are most nearly what are termed perfect harmonics, and also in the degree in which the successive notes of melodies and chords are all based upon the harmony of one key, or, if of many keys, in which all follow each other according to the simplest principles of harmonic progress. For examples of this, see the music on page 250.

But there is no art in which subordinated *dissonance* plays a more important part. Not to speak of that which is necessarily involved in every transition to a new key,

mentioned a moment ago, even the chords of the dominant, subdominant, and tonic, which are used in completing the simplest harmony, are suggestive of dissonance. Especially is this the case with the dominant, which often includes the only remotely harmonic seventh note.



Sub-dominant. Dominant. Tonic.

And when we pass to a composition at all intricate, there is apparently no end to the number or variety of these subordinate dissonances. They are not an injury to music, but of the greatest benefit. By adding to the perfectly harmonic notes of a chord an occasional partly inharmonic note, as in the chord of the seventh or ninth, the musician is enabled, through using one or a series of such chords, to connect any possible combinations of notes however different. Notice the illustrations of the methods of making transitions from one key to another that are given on pages 250 and 275.

In this place, however, we cannot discuss fully any of these methods, but merely, in a general way, indicate what they are, and their general importance. We pass on to *consonance* in colors and outlines. Like that in sound, it differs from *repetition*, although it partly involves it. As was said on page 245, the difference is mainly in *amount* or *size*, in *combination*, and in *material*. Difference in *amount*, so far as it applies to color, involves no principle not sufficiently treated in connection with *balance*, *symmetry*, and *interchange*. Differences in *combination* and *material*, however, need more mention. As all recognize, there may be, without any real *repetition*, a *consonance* of

color between a plaided woollen shawl of two hues, a brocaded silk of two shades, and a satin of one shade. Take the painting in the New York Metropolitan Museum, by Carl Marr, entitled "Gossip." Almost every prominent object in this—the window-curtain, the table-cloth, the apron of one of the principal figures, the bodice of another, the floor, etc.—is depicted in white. On the contrary, in Fortuny's "Spanish Lady," hanging near it, almost every article of clothing is depicted in black. In each picture, however, the prevailing tone is applied to each different object, with a slightly different admixture. Otherwise there would be no way furnished of distinguishing one thing from another. As it is, each is represented as having a texture peculiar to itself, a condition consistent with *consonance*, but not with exact *repetition*.

Again, we often see instances of a combination of an illuminating color and of a color natural to the objects illumined. Sunlight, moonlight, twilight, candlelight, all produce different atmospheric effects both of light and of shade, and, according to the nearness and remoteness of our viewpoint, these work changes in the foliage of the same tree or the folds of the same fabric. Such changes as these, too, and in all that is termed the *value* of colors, are not consistent with exact *repetition*, but they are with *consonance*. Once more, the same kind of light, as, for instance, in a sunset or a storm, often produces a similar color, as of a pervading gold or gray, in objects as different in material and even in hue as rocks, water, trees, and clouds. Notice in the New York Metropolitan Museum, the "Ville d'Avray" by Corot, "Le Soir" by C. H. Davis, "The Bashful Suitor" by Joseph Israels, "Spring" by Bolton Jones, "Woodland and Cattle" by Auguste Bonheur, and "Un Quatuor" by W. T. Dannat.

In other cases, the same effect, which is termed *tone*, can be produced independently of the illuminating light, merely by placing in juxtaposition objects of different materials that nevertheless have, or may be supposed to have, similar hues. In the painting in the New York Metropolitan Museum, entitled "Monks in an Oratory," by F. M. Garnet, the color of the monk's robes is the same as that of all the woodwork of the chapel. It is hardly necessary to point out that such effects, while resembling *repetition*, are due not to it so much as to that development of it, inspired by a desire to have objects that are associated in thought associated also in appearance, which we find in *consonance*.

Some confound *consonance* with *harmony*. Of course, everything consonant is harmonious, but the latter includes much more than the former. It includes *dissonance*, which has been joined with *consonance* and subordinated to it so as to form with it a *unity*. *Dissonance* in color corresponds to noise in music, and for this reason must be clearly distinguished from what is termed *contrast*[1] in color. This is produced by the *complementary* colors, and in *dissonance* the colors are not complementary. They have no connection whatever. It is owing to this that, when placed side by side, they can be made to seem parts of the same general whole only by the methods of *interchange* as illustrated on page 251, or of *gradation* and *transition* which weld them into a closer *unity*. These latter will be considered in the next chapter. It will be understood that

[1] As stated on page 28, *contrast* or *antithesis* is an effect produced when two objects differ diametrically in, at least, one particular, and yet agree in others. Where there is dissonance, there is not, necessarily, any agreement whatever. The similar tones entering into the major chords of *C natural* and *F natural* produce *contrast*; the dissimilar ones entering into those of *C natural* and *C sharp* produce *dissonance*.

all the methods of which we are now speaking enter into the constitution of harmony, but harmony itself involves a great deal more, of which it is aside from the purpose of the present volume to speak.

Let us pass on to some exemplifications of these methods in outline. Two arms in the human figure may be alike by way of *repetition;* but an arm and a leg differing in *size*, a bare arm and a clothed one differing in *combination*, or a limb just suggested as underneath drapery and the drapery itself differing in *material*—all these, though often involving some *parallelism* and *repetition* are often alike also by way of *consonance*. (See "Group of the Niobe," Fig. 45, page 146, "The Dancer," Fig. 56, page 183, "The Soldier's Return," Fig. 52, page 176, and "The German Captive," Fig. 53, page 177.)

In the tapestry of Raphael's "Ascension," the positions of the disciples kneeling on either side of the Christ, the very bend of their knees, hips, shoulders, elbows, while sufficiently varied to prevent monotony, are nevertheless so much alike that we at once recognize them as *consonant*. Examples of this sufficient for our purpose may be observed in Figs. 16, page 73; 26, page 81; 46, page 147; 70, page 215; and 94, page 288. In the same way, many, perhaps the most, of the different features connected with a building said to be erected in some one style are alike. The use of color enters largely into effects in painting, and much imitation of natural forms characterizes both painting and sculpture. Neither fact is true of architecture. Its effects are often confined to those of forms alone. This makes them of supreme importance. Its forms, moreover, are originated by the artist. This makes it easy to have them such as interfere with what may be called the natural requirements

of art. For both reasons, the architect needs to be exceedingly careful in his work. A painter has but to copy a tree as he sees it in nature, and every part of it will be consonant. The leaves or branches will differ in size and shape and, in the autumn, at least, differ sufficiently in color to suggest differences in combination and material. But, comparing leaf with leaf and branch with branch, the same principle of formation will so manifest

FIG. 85.—CHÂTEAU DE RANDAU, VICHY, FRANCE.
See pages 124, 180, 262.

itself in every part of the tree that no one who sees it can doubt that each belongs to the same organism. A building should appear to be as much a unity in this sense as a tree. Exact repetition of the same forms, as already explained, would always make it seem thus. But, in architecture, exact repetition is not always possible; nor even, if we wish to produce thoroughly natural effects,

desirable. The method that is both possible and desirable is *consonance*. A moment's reflection will reveal, too, that there are certain very simple devices of arrangement which necessarily secure this effect. It ought to reveal, also, that the effect is important enough to make even a child notice the defects in cases in which it is neglected.

FIG. 86.—CHAPEL IN CATACOMBS OF ST. AGNES, ROME.
See page 262.

Notwithstanding this, how many architects fail to recognize the fact, architects too of the highest reputation? To such an extent is this the case, that one is tempted by it toward the easy task of a destructive critic in general, and to the easier task of destroying their reputations in particular. But a man who becomes a destructive

critic, except when intellectual slaughter is justified in order to prevent the slaughter of the truth which he represents, is one who has turned from the discussion of principles and is willing to imperil the acceptance of them for the empty, often merely malicious satisfaction of doing personal harm to those whom he should wish to help. In the long run, to live and to let live is the wisest way of serving the truth, whether of mind or heart. Accordingly, most of these illustrations are taken from foreign and remote sources. But each represents some effect that is staring every American in the face, almost every day.

FIG. 87.—INTERIOR OF ST. BOTOLPH, BOSTON, ENG.
See page 262.

Of those connected with exteriors, notice the discords manifested in the radically different shapes given to the windows and openings and gables in the Church of St.

Nigier, Lyons, Fig. 67, page 205, in the Palace of Justice of the same place, Fig. 29, page 85, and in the "Plan for a Theatre and Ton-Halle," Fig. 60, page 191. Compare with these, the consonance of corresponding forms in really great buildings like the Greek Temples, Fig. 1, page 15, the Taj Mahal, Fig. 3, page 19, the Cathedrals

FIG. 88.—INTERIOR OF ST. MARTYN'S CHURCH, CANTERBURY, ENG.

See page 262.

of Salisbury, Fig. 68, page 207, St. Mark, Fig. 31, page 88, Canterbury, Fig. 32, page 89, St. Sophia, Fig. 42, page 123, and Sienna, Fig. 97, page 292. Notice, too, a violation of consonance closely allied, because the forms are composed of lines, to that of *parallelism*, in the differences in pitch given to the different parts of the

roof in the "Plan for a Theatre and Ton-Halle," Fig. 60, page 191, and also in the "Chateau de Randau, Vichy," Fig. 85, page 258. Compare these with the consonant effects in "St. Mark's, Venice," Fig. 31, page 88, and the "Mosque of St. Sophia," Fig. 42, page 123. Look now at some equally discordant interior effects, which also are connected with a violation of *parallelism*. Observe first the discord and confusion of lines in the end view of a "Chapel in the Catacombs," Fig. 86, page 259. Observe, too, the discord between the ceiling of the church and of the chancel, and also between the chancel ceiling and its window in "St. Botolph, Boston, England," Fig. 87, page 260. The same features are discordant in the old church of "St. Martyn's, Canterbury," Fig. 88, page 261. So are the front arch of the tower and that of the chancel just beyond it in the "Litchfield Cathedral," Fig. 89.

FIG. 89.—INTERIOR OF LITCHFIELD CATHEDRAL, ENG.

How thoroughly at home an American ought to feel in these churches? Do they not furnish specimens of what we find exemplified almost everywhere in our country? Yet harmony of effect that results from *consonance*, to which *dissonance* is kept *subordinate*, is almost as

FIG. 90.—FARNESE PALACE, ROME.

See page 265.

important in architecture as in music. Only in the sense in which Chinese music, mainly struck from gongs and drums, is worthy of being classed as a product of the latter art, are structures in which *confusion* is made so prominent, worthy of being classed as products of the former. Compare these effects now with the consonant ones in Fig. 12, page 49, and Figs. 78 and 79, pages 235 and 236.

It is difficult to conceive how a man who has never studied the subject at all can fail to detect the blunders in some of the discords above. Certainly few children playing with building blocks would make mistakes analogous to them. The outlines of the toy houses that they construct are usually consonant at least. Why is this not the case with those planned by architects? For the same reason, probably, that many in other arts—musicians, elocutionists, painters—owing to false methods of studying or of applying rules, seem to be unable to sing, speak, or color in a natural way. Certain methods of studying or applying the laws of architecture seem to have a corresponding effect. Those who should be conversant with them neglect to exemplify requirements that are the most instinctive of which we know.

It must be borne in mind, however, that one reason,—the chief one perhaps,—why architectural discords such as have been illustrated displease, is because it is felt that they are meant to be, or at least should be meant to be, concords. If dissonant forms are not so many and prominent as to make them seem other than subordinate, they may add greatly, as has been said before, to the attractiveness of that in which they appear. Thus, as we all recognize, a few round or arched windows introduced into walls, gables, or towers characterized by horizontal

lines afford relief to what might otherwise appear monotonous,—a fact well illustrated by the alternation of straight and round forms in the Doric frieze (see page 201). It may be well, too, in order to prevent misapprehension, to add that there is a sense, which cannot, however, be explained here, in which curves, angles, and squares, though differing in shape, may be perfectly harmonious, inasmuch as they may be in proportion to each other. In the façade of the Farnese Palace (Fig. 90, page 263), also in that of St. Peter's, Rome, we have (Fig. 23, page 78) illustrations of this, as well as of a way in which *dissonance* can be used, so as not to lessen, but very materially to heighten, the general effect of *consonance*. Many of the window-caps in these façades are alternately circular and angular; yet as the height and width of all the caps are the same, all of them, though not repetitious, are nevertheless sufficiently alike to be in every regard harmonious. This is so because in them, whatever *consonance* and *dissonance* they contain, blend. They fit into the same general form in such a way that there is no suggestion of anything but *unity*.

CHAPTER XVI.

GRADATION, ABRUPTNESS, TRANSITION, AND PROGRESS IN POETRY AND MUSIC.

Gradation and its Relation to Principality, Central-Point, and Massing—Abruptness, Transition, and Progress—Connection between these Methods and those already Considered—Gradation in the Sounds and Colors of Nature—In its Outlines—Abruptness in Nature—And Transition—Difference between this and Progress—Gradation in the Thought and Form of Poetry—Abruptness—Transition—Gradation in Music—Abruptness—Transition—Continuity in Poetry without Progress—With Progress—Continuity and Progress in Music.

A REFERENCE to the list of methods on page 131 will show us that the next ones claiming our attention are *gradation*, *abruptness*, *transition*, and *progress*. By the first of these is meant an arrangement causing one form to differ from a second according to the same method, and sometimes degree, in which this second differs from a third, between which and the first the second is situated. In *consonance*, as we have found, forms are never exactly alike; and if, in order to secure the effect of *unity*, we try to arrange them so as to seem alike, we are necessarily led into *gradation*, a method sustaining, for this reason, the same relation to *consonance* as *principality* to *comparison*, *central-point* to *congruity*, and *massing* to *repetition*. Each of the latter of these pairs has its origin in an attempt to bring together into one *organic form* many factors characterized, respectively, by each of the former.

As will also be observed, *gradation* is necessary to the completeness of the arrangements begun in *principality*, *central-point*, and *massing*. The first two of these could exist without *gradation*, but in the degree in which a form is a distinct *unity*, subordinate features and radiating lights and lines diminish gradually in prominence and intensity as they move outward from the principal feature, or the centre. The same is true of *massing*. Things that are brought together by way of *repetition* are more alike and less alike; and the way in which they are graded, according to the degrees in which they manifest differences, measures the unity of the general results. In other words, without *gradation*, the *principal*, *central*, and *massed* factors might seem to belong to one product, and everything else to another product.

As is the case with all the methods to which it corresponds, *gradation* in art does not exist without its antithesis, which may be termed *abruptness*. By this is meant a sudden, unforetokened change from one theme, key, shape, shade or color to another. Of course, a composition in which there are many of these changes can have but little unity. Yet, even in connection with them, through the method of *gradation*, a nexus can often be formed between what precedes and what follows, of such a nature that, in spite of the abruptness, everyone can perceive a connection of the one part with the other. This nexus is called a *transition*. Finally, *consonance*, *dissonance*, *interchange*, *gradation*, *abruptness*, and *transition*, all together and in different ways, when, on the whole, there is a continued forward movement, result in artistic *progress*.

Corresponding to what has been said of *gradation*, it may be as well to add, but without explanations—where none are needed—that as methods of arrangement, *abrupt-*

ness is related to the general conception of *dissonance* just as is *subordination* to *contrast*, *setting* to *incongruity*, and *interspersion* to *alteration;* and that *transition* is related to *interchange* as *balance* to *complement*, *parallelism* to *comprehensiveness*, and *complication* to *alternation*. *Progress*, again, which may be said to influence primarily the outlining of movements in time, is related to *continuity* very much as *symmetry*, which has a corresponding effect upon outlining in space, is related to that which has been termed *organic form*.

Like the characteristics hitherto considered, all these to be treated now are exemplified in nature. In listening to a bird singing, to a wind whistling, or to a surf breaking, we usually notice a gradual increase and decrease in the blended sounds. It is the same when observing color. Any ordinary lawn reveals an almost infinite number of shades of green, and the most of these coalesce, but show scarcely a trace of when and where they do it. A clear sky at dawn or sunset exhibits between the horizon and the zenith every color of the spectrum from red to purple, yet no boundary line between any two colors. Among the maple trees in spring, when just beginning to show their leaves, one can clearly see hues as different as red, yellow, and green, yet it is wellnigh impossible to find in any given cluster just where one color stops and another starts. It is the same with a majority of the hues of nature, whether seen in the flowers beneath us or in the clouds above us. In fact, it is one of the most common laws of sight, that when different colors or different shades of the same color come together, the line of demarkation between them is indistinct.

The same fact of gradation is observable also in outlines. The very laws of perspective often necessitate this.

As we look at the successive arches of a bridge, or of an aqueduct, we see them gradually becoming smaller and smaller. If we look at a row of trees that is sufficiently long, we see it pass gradually into a narrow stretch of green. Two parallel outlines, if we continue to trace them when carried up toward the zenith, or toward the horizon, appear gradually to converge. Sometimes, if they ascend a hill, though themselves perfectly straight, they seem gradually to pass into curves. A similar fact is still more evident in the outlines of forms not so influenced by the laws of perspective. Think of the innumerable curves and angles and straight lines that make up the contour of every mountain, tree, bush, fruit, flower, bird, beast, and man; yet often, not even with a microscope, can one tell just where one form of line ceases and another begins.

Abruptness also is a characteristic of nature. We are familiar with it as illustrated in the sudden cry of fright, call of command, crash of thunder, or flash of lightning; in the blue or gray of the sky against the green of the trees or the brown of the cliffs; in the dark of shadows when they fall against an object made bright by the sunshine; and in the angles that connect the limbs and bodies of every plant and animal.

At the same time, there are more instances in nature of *transition* than of *abruptness*. In the notes of the same bird, the conversation of the same man, the colors of the same flower, the outlines of the same hill, *abruptness* here and there usually introduces merely more sudden steps in *transitions*, which, on the whole, are in harmony with the requirements of *gradation*. As a rule, even the green of the sea turns chalky in the shallows, and is churned to foam before it breaks upon the white cliffs, and the blue

of the zenith clouds into gray before it reaches the gray hills on the horizon.

The arrangement of the methods on page 131 shows that *progress* is related to *consonance* and the methods associated with it just as *continuity* is to *repetition*. *Consonance*, as we have found, is *repetition* with an increment. Just so, *progress* is *continuity* with an increment. The former necessitates change; the latter does not. At the same time, there can be no *progress* without some *continuity*. A song or speech that did not appear to be the development of some continuous melody or story, might have movement, but it could have no progress. So with an object of sight. When, after an interval of time, a tree or a man, once seen, is seen again, we can know that either has progressed only so far as we can recognize that the one is the same tree or the other the same man. That is to say, *progress* is the movement of something, or, possibly, merely some one form of a movement that is clearly revealed to be a *unity*. *Gradation* is a help to this conception, but occasional, especially intermittent, *abruptness* is not inconsistent with it. The thunder and lightning of an approaching storm, or the cries and footsteps of an approaching mob, are abrupt enough, yet they make *progress*. They do this, however, only when that which is *abrupt* is clearly recognized to be a part of a *transition* from one phase of the same movement to another.

Now to illustrate these characteristics: In poetry, *gradation*, like the other methods considered, is exemplified both in the sense and in the sound. Of the former, we can all recall instances in the gradual unfolding of the plot which characterizes even ordinary novels and dramas. Of the latter, we have illustrations in all the elements that enter into sound, namely: time, force, pitch, and quality.

We notice it wherever we find great regularity of time or rhythm, with the gradual swelling and sinking and rising and falling of the accent and pitch which necessarily accompany such a rhythm. Of the same nature is an effect in quality, not hitherto recognized as an essential element of poetic form, but to which the ears of our foremost poets in almost all of their most popular passages—made popular often solely because of it—seem to have been unconsciously guided. It may be termed *phonetic gradation*, and is produced by an arrangement of vowels and consonants such as to cause their sounds to follow one another in the order in which articulation necessitates the opening of the vocal passages of the mouth more and more from the lips and tip of the tongue backward, or else more and more from the back of the mouth and tongue forward;—more and more, that is, as in the series of vowels in the words *meet*, *met*, *it*, *ate*, *at*, *care*, *but*, *kite*, *are*, *got*, *aught*, *out*, *foot*, *lute*, *boot*, *bucher*, *ooze*; and as in the series of consonants represented by b, (p), m, n, w, v, (f), d, (t), th, z, l, r, j, (ch), g, (k), h; or else as in series of vowels or consonants the reverse of these. In the following lines the *gradation* of vowels on the emphatic syllables is from what we may term, as thus explained, the front tones to the back tones:

Here where never came, alive, another.
—*By the North Sea: Swinburne.*

'T is better to have loved and lost
Than never to have loved at all.
—*In Memoriam: Tennyson.*

Kind hearts are more than coronets
And simple faith than Norman blood.
—*Clara Vere de Vere: Idem.*

And in these, both in vowels and consonants, from the back to the front tones.

Ghostless all its gulfs and creeks and reaches.
—*By the North Sea: Swinburne.*

Tho' lost to sight, to memory dear.
—*Anon.*

To shoot at crows is powder flung away.
—*Epistle to Hon. Paul Methuen: Gay.*

The empathic sounds are graded from the back to the front tones in the first of these lines, and from the front to the back tones in the second:

Odors of orange flowers and spice
Reached them from time to time.
—*The Quadroon Girl: Longfellow.*

As distinguished from *gradation*, the following may illustrate *abruptness* with *transition* both in the sense and sound:

I marched to the villa, and my men with me
That evening, and we reach the door and stand,
I say—no it shoots through me lightning-like
While I pause, breathe, my hand upon the latch.
—*The Ring and the Book: Browning.*

And the following shows *abruptness* in the sound, but without *transition:*

Just writes to make his barrenness appear,
And strains from hard-bound brains eight lines a year.
—*Epistle to Dr. Arbuthnot: Pope.*

Poetic expression, when most in accord with *gradation*, involves merely the use of those ordinary connecting

words and phrases with which we are all familiar. Here is a *transition*, with some abruptness too, in the thought:

"Such
Is wisdom to the children of this world;
But we 've no mind, we children of the light,
To miss the advantage of the golden mean,
And push things to the steal-point." Thus the courts.

Is it settled so far? Settled or disturbed,
Console yourselves: 't is like . . an instance, now.
You 've seen the puppets, of Place Navona, play,—
Punch and his mate,—how threats pass, blows are dealt,
And a crisis comes.

—*The Ring and the Book; Tertium Quid: Browning.*

And here in the sound or rhythm:

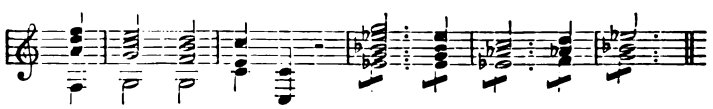
The cataracts blow their trumpets from the steep,—
No more shall grief of mine the season wrong:
I hear the echoes through the mountains throng,
The winds come to me from the fields of sleep,
And all the earth is gay;
Land and sea
Give themselves up to jollity,
And with the heart of May
Doth every beast keep holiday;—
Thou child of joy
Shout round me, let me hear thy shouts, thou happy shepherd boy.

—*Ode on Imitations of Immortality; Wordsworth.*

Gradation, as a musical term, is most commonly associated with a regular increase or decrease of force. But as in poetry, the essentials of the method may be exemplified either in theme or development, and, in the latter, either in time, force, pitch, or quality. Besides this, they may characterize either the melody or harmony. What their effects are, however, seem to need to be illustrated,

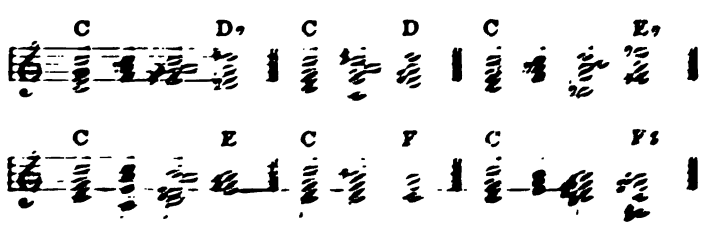
only so far as they relate to harmony, or to melody as connected with this. It was said in connection with *interchange* that, in passing from one cord to another, especially if to a different key, it is customary to have one of the notes in both chords the same, so that the ear, recognizing it in both, can feel, notwithstanding other differences between them, that like has been put with like. Wherever we find series of cords, or a melody that can be harmonized by series of chords, that follow each other in this way, there we find illustrations of *gradation*. Notice the successions of chords in the examples of *transition* given on page 275.

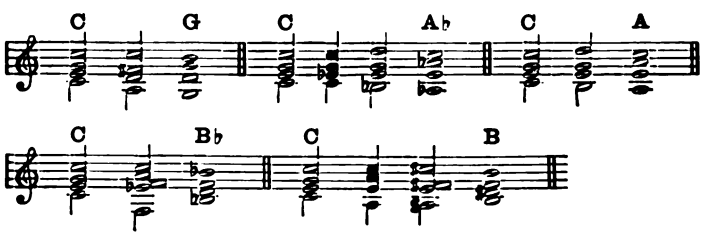
Abruptness results, of course, wherever there are sudden interruptions and changes in either theme or form, and these in either time, force, pitch, or quality, and in either melody or harmony. Here is an example of harmonic *abruptness* taken from Marx's "Musical Composition," chap. vi.



In this, as will be noticed, the passage is immediate, *i.e.*, without any form of *transition* from the key of C natural to that of E flat. In explanation, Marx says that "this continuation is a phrase by itself, as it were; a new piece which takes up the thread of the previous phrase at a different place, and perhaps in a different sense. And it is exactly because the continuation in the third measure is considered as a new phrase that we consider the new chord E♭-g-b♭ at once as a tonic chord, though the key of E♭ is only indicated by the dominant chord b♭-d-f-a♭ which occurs three notes later."

Transition is a passage from one key to another. It sometimes necessitates using a series of chords in which there are effects like those of *interchange* illustrated on page 250; and it always necessitates some application of the principle of *gradation*. But besides this it necessitates using certain chords in the new key, and these too, in a certain order, either that of the dominant seventh (see music on page 254) followed by the tonic, or, if the *transition* needs to be unmistakably emphasized, that of the subdominant followed by the other two. The reason of this is that the ear has become so accustomed to the order of the notes in the musical scale and of the chords that harmonize them, that it is only when one hears these latter in succession that he can recognize in what key the music is, or, if there has been a *transition*, to what key this has been made. The following illustrate common methods of making transitions from the major key of C natural to all the other keys. It will be noticed that every chord in the *transition* carries out the principle of putting like with like by containing at least one note which is the same as one in the preceding chord. In order to fulfil this condition, it is necessary, as a rule, to strike some chord between that of C major and the new key's dominant seventh. But when this latter is reached, the tonic of this key is suggested at once, and it would be a disappointment to the ear did it not follow.





Now let us glance at the influence, upon these arts, of *progress*. As already intimated, this needs to be distinguished chiefly from *continuity*. The latter in poetry may be manifested in the onward flow or sweep of any details, however connected with the story or the style; but *progress* is manifested in the fact that these details are all directly connected with the development of the main plot.

Here is *continuity* without *progress:*

On his bold visage middle age
Had slightly pressed its signet sage,
Yet had not quenched the open truth
And fiery vehemence of youth;
Froward and frolic glee was there,
The will to do, the soul to dare,
The sparkling glance, soon blown to fire,
Of hasty love or headlong ire.
His limbs were cast in manly mould
For hardy sport or contest bold;
And tho' in peaceful garb arrayed
And weaponless except his blade,
His stately mean as well implied
A high-born heart, a martial pride.

—*The Lady of the Lake: Scott.*

And here is *continuity* with *progress:*

"A stranger I," the huntsman said,
Advancing from the hazel shade.
The maid, alarmed, with hasty oar,
Pushed her light shallop from the shore,

And when a space was gained between,
Closer she drew her bosom's screen,
Then safe, tho' fluttered and amazed,
She paused and on the stranger gazed.

—*Idem.*

Continuity in music is manifested wherever, with or without variation, there is an apparent continuance of the theme or themes from which a composition as a whole is developed; but *progress*, whenever in connection with *continuity*, there is also an apparent advance in the unfolding of the musical idea. In a symphony *continuity* is manifested in the separate movements considered merely by themselves rather than in all the movements taken together considered as parts of one whole. Exactly the opposite is true of *progress*.

CHAPTER XVII.

GRADATION, ABRUPTNESS, TRANSITION AND PROGRESS IN PAINTING, SCULPTURE, AND ARCHITECTURE.

Gradation in Light and Shade—In Color—Abruptness—Transition—Connection between these Methods and Curved, Angular, and Mixed Effects of Lines—Reasons for the Extensive Presence of Curves in Nature and Art—Why the Curve is the Line of Beauty—The most Common Curve of Nature is a Literal Fulfilment of the Method of Gradation—As well as of all the Methods of Artistic Composition—Curvature as Applied to the General Contour of Groups in Painting and Sculpture, especially to the Limbs of the Human Form—In Architecture—Why Curves are less Used in this Art—Gradation in Combinations of Lines or Contours—Abruptness in the Same—Gradation in the Outlines of Architecture: Spires, Towers, Foundations—Over Openings—In Italian Towers—Lines of Lower and Upper Window-Caps, Gables, and Roofs; Rounded Arches Below and Pointed Above—The more Pointed Arches Below—Abruptness less Appropriate in Architecture than in Painting and Sculpture—Progress in Painting and Sculpture: False Methods of Obtaining the Effect—Right Methods—In Architecture—Conclusion.

IT still remains for us to examine the influence of *gradation*, *abruptness*, *transition*, and *progress* upon the arts of sight. Here, as in all cases, gradation is one of the means of carrying out the requirements of *principality*, *central-point*, and *massing*. In the treatment of light and shade, it causes the brilliancy of the coloring, from the point where there is the greatest degree of illumination, to become less and less intense till it passes into shadow. "Music," says Ruskin, "must rise to its utmost loudness and fall from it; color must be graduated to its extreme

brightness, and descend from it; and I believe that absolutely perfect treatment would in either case permit the intensest sound and purest color only for a point or for a moment."

But *gradation* in color is not confined to the use of light and shade. It is employed in connecting hues essentially different, the outlines of which, except when greatly illumined, are seldom perfectly distinct. At most places, especially where the shade rests, the color of one object, by imperceptible degrees, is merged into that of other objects. Effects are thus made to accord with those perceived in the external world, as already noticed on page 268. But it is important to bear in mind, too, aside from this, that, in looking at any collection of objects, our eyes are generally attracted to the place where the chief light falls, and while they are fixed upon this place, we see very indistinctly objects that are not in it. The endeavor of the artist to represent the appearance of things when the eyes are fixed thus upon one of them, is that which justifies his making this more bright and prominent as contrasted with its surroundings than seems to be the case in nature. But this seems so in nature, because, when observing it, our eyes look not at one thing, but glance restlessly from it to other things.

It is hardly necessary to add that the requirements of *gradation* are not so universally applicable as to exclude an occasional use of *abruptness* manifested by sharp contrasts of colors. As a rule, the brighter the light illumining an object, the more distinctly are its peculiar colors revealed and the darker are the shadows cast by it upon surrounding colors. In such conditions, the lines that separate one shade from another are very clear, and the representation of these necessitates placing one color

directly against the other, with no suggestion of gradation. As a rule, however, colors that are placed together even in this abrupt way must be such as naturally harmonize.

But sometimes, of course, they cannot harmonize, nor be made to do it, and then it is important to consider the method of *transition*. When this cannot be effected, as in *gradation*, by changing the colors themselves, and causing them to approach each other by regular degrees, either the course must be adopted which was described on page 251, under the name of *interchange*, or else a color harmonic with both, must be placed between them. Here is the way in which this latter method is described by Charles Blanc, in his "Grammar of Painting and Engraving," chapter xiii., as translated by K. N. Doggett. In speaking of the use of color, he says: "In one of the pendentives that so magnificently decorate the Library of the Corps Legislatif, the executioner who has cut off the head of John the Baptist is dressed in red and blue, two colors whose juxtaposition is softened by a little white, which unites them without sacrificing the energy suitable to the figure of an executioner. Thus we realize a rare harmony, that of the tricolor flag. Zeigler has observed that this flag, spread out horizontally, represents a discordant whole, but through the effects of the folds the quantities become unequal, and, one color dominating another, harmony is produced. The wind that agitates the stuff in varied undulations makes the three colors pass through all the attempts at proportion that an intelligent artist can make."

As applied to the use of lines, *gradation*, *abruptness*, and *transition* respectively are the principles, the developments of which lead to curved, angular, and mixed effects. A line in art indicates a certain direction. *Gradation* is that

which produces a change by regular degrees. When the character of a line is changed by regular degrees we have a curve. If it be changed without regard to these degrees we have an angle; and if it be changed both with and without regard to them we have a mixed effect.

Gradation is so common in nature and art, that we should expect the same to be true of the curve which represents it in outline. Such is the case. All the conditions of sight tend toward this result. The retina, on which every image of the external world is impressed, has a rounded surface. So has the outer eye. In consequence of this, the field of vision, lying before any one glance of sight, can be inscribed in curves. So, if sufficiently remote, can all objects even though their outlines are not curved,—objects like the hills that circle the horizon, or the tail of the comet in the sky. If we examine a small object near at hand, we see all its outlines distinctly in the degree in which these conform to the rounded shape of the organs of vision. If we look at the centre of a wheel, every part of its tire is equally visible. If we look at the centre of a square, its four angles, in the degree in which it is large, are indistinct. Hence, for a psychological reason, because, in such cases, the mind can more readily perceive and understand what the contour is, curved forms afford the most satisfaction. It is not strange, therefore, that the same Power that formed the eye has conformed to its requirements most of the outlines of the natural world.

When, in addition to this, we consider the unending possibilities of *variety* afforded by the curve, and the infinite suggestions of direction pointed out as by fingers of light wherever it deviates from a straight line, we know enough to account for the fact universally conceded that

the curve is the line of beauty. This is true whether applied to separate parts of objects or to their wholes, to a single leaf or to a cluster of leaves, to a branch or to a cluster of branches, to a tree or to a grove, to a particular object that may be examined near at hand, or to general outlines described by trees and rivers in the distance. The same is true, too, of every member and limb, as well as of the whole body, of every bird or animal. All these natural objects are beautiful, largely because of the infinite number and variety of their curves.

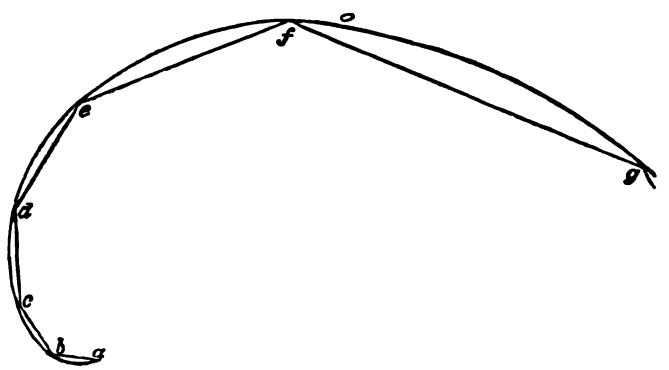


FIG. 91.—CURVE EXEMPLIFYING GRADATION.
See pages 282 and 284.

It is well to notice, too, that, as a rule, the lines of curvature in natural objects are not perfectly circular, any more than the lines of radiation or parallelism are perfectly straight. On the contrary, the most common outline in nature is said, by Ruskin, "Modern Painters," vol. iv., p. 5, chap. 17, to be a curve so described as to have a constant tendency to become straight, although it may never become so. Figs. 91, above, and 92, page opposite, according to him, represent curves of this description.

In Figure 91, the angles at *a*, *b*, *c*, *d*, and *e* are in each case the same, the line *a*—*b*, becomes regularly shorter than *b*—*c*, and so on. In the direction of *g*, the curve *a*—*g* evidently inclines more and more to differ from the requirements of a circle, and any small portion of it, to conform more and more to the direction of a straight line. In Fig. 92, the distance between the lines *A*—*a* and *B*—*b* and *C*—*c*, etc., is the same, but the curved line *a*—*b* becomes regularly shorter than *b*—*c*, and so on. It is evident that in this figure the curve *a*—*g*, while constantly approaching the form of a straight line can never become one.

Why curves of this kind are seen so frequently in nature, and why, when they are seen, they are considered especially satisfactory, has been often asked. Can the question not be answered in this connection by saying that the "constant tendency" to become straight which they manifest causes them to fulfil, perfectly, the requirements of *gradation*. Notice, too, that in doing this, they necessarily fulfil the requirements of most of the other methods developed from *comparison*. In the first figure, the angles at *a*, *b*, *c*, etc., are the same, and in the second figure the distances between the lines *A*—*a*, *B*—*b*, *C*—*c*, etc., are the

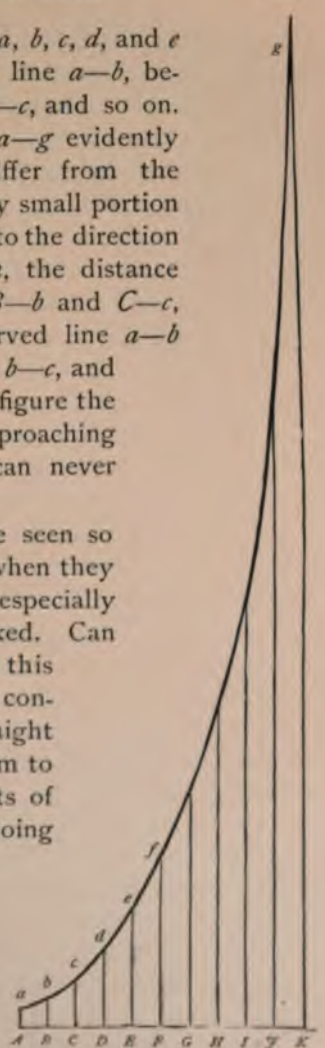


FIG. 92.—A CURVE EXEMPLIFYING GRADATION.

same. The principle of *repetition*, therefore, enters into these curves, notwithstanding the constant tendency that they show to move in the opposite direction. Each of the curves, too, is so constructed that any given part of it can be magnified so as to represent exactly *f*—*g*. There is therefore a sense in which these curves are in accordance with the method also of *consonance*. It is not necessary to show that if they involve *repetition* and *consonance*, they involve, as well, almost all, if not all the other methods that on page 131 are associated with these.

From what was said in Chapter X. in connection with *central-point* as related to the laws of perspective, as well as of *symmetry* in Chapter XI., we must infer that the principle of curvature must be fulfilled in successful art, not only in such a way as to cause the separate objects represented to seem to have the same rounded appearances as in nature, but in the arrangements of objects as related to each other; in other words, not only in imitating particular forms but also in composition, where many different forms not actually curved in nature are put together. It would not be pleasing, for instance, to see a group of human figures so arranged that a straight line drawn across the top or bottom of it would touch the crown of every head or the toe of every foot. The eye seems to require an arrangement whereby the more central heads shall be a little higher than those on either side of them; in short, whereby the general contour of the group as a whole shall be curved, and similar in this regard to the contour of flowers, trees, groves, mountains, living creatures, and, in fact, of almost all natural objects, whether animate or inanimate.

In painting, as also in sculpture, as can be shown from such works as the "Theseus," Fig. 93, page 285, most

marvellous effects are owing to the way in which the infinite curves that make up the contour of the human form are rounded and blended, exemplifying thus not only *gradation* in the curves, but *transition* in the mixed lines. Besides this, the nose, elbow, knee, and heel all sufficiently illustrate *abruptness*. There are those who, in view of the apparent fulfilment of law in all such cases, think that

FIG. 93.—STATUE OF THESEUS.
See page 284.

the whole form and its separate parts can be drawn according to mathematical principles underlying the laws chiefly of curvature. D. R. Hay, in his works on the "First Principles of Symmetrical Beauty," and on "The Human Figure and the Human Head," has given an ingenious and exceedingly interesting series of drawings intended to prove that this is so. He tries to show, too, that

Greek sculpture was developed from principles similar to those that he unfolds. For reasons that it would be irrelevant to give here, he is probably mistaken in this latter opinion. The proportions of Greek sculpture were by no means the same in different products and periods; showing that although, like our own, the Greek artists may have had their theories with reference to the subject, these were not universally accepted. A large part of their success in practice, too, must have been owing, in strict analogy with what would be true in our own time, to rare perceptive powers and to exceptional opportunities for observing the unclothed human form afforded by the baths, festivals, and sports of the period. But there is much in what Mr. Hay says that is suggestive and instructive.

In architecture, the methods of curvature are applied to only a limited extent, and mainly to the decoration of interiors, where the processes employed, as when laying out parks and gardens, are more allied to drawing and painting than to building. The Greeks, indeed, in order to carry out the laws of perspective, made many of the apparently horizontal lines of their buildings slightly curved, but in doing this they can scarcely be said to have applied the methods of curvature to exteriors, their object being not to make any lines appear curved, but to prevent them from appearing so.[1] Of course, there are curves used in architecture, as in rounded arches and domes; but these are not so frequently, as in the other arts, curves that have a constant tendency to become straight. They are usually larger or smaller arches of regularly constructed circles. The purely artistic reason

[1] See page 176.

for this absence of curves is that too much *variety* of this kind is less desirable here than in the other arts.

Painting and sculpture imitate the forms of nature, and if an artist find irregularity in these, this fact is an excuse for his copying it. But the forms of architecture are not imitated. They are originated by man, as a result of that faculty of the mind by which he reduces to systematic *unity* and *order* appearances that do not manifest these in nature. In such circumstances, if architectural forms do not show *unity* and *order*, and show it in a marked degree, they simply do not accomplish the end for which they were designed; and nothing that does not do this can be called a success.

Gradation is manifested not only in the use of single lines but of combined ones as, for instance, in series of curves and angles, the different sides of which depart in regular degrees from exact *parallelism*. In his cartoon depicting "The Death of Ananias," Raphael, (Fig. 94 page 288) causes the terror of the principal figure to be manifested in similar attitudes of the figures on both sides of him, but as they gradually recede into the background, their expressions and attitudes become less and less indicative of the feeling at the centre of interest.

In fulfilment of the same method, both in painting and sculpture, the hundreds of curves that together constitute the contour of the human body are made to pass into each other, causing its members gradually to expand or taper. Yet there are places, as at the heel, where the transitions are very *abrupt*. The number of these is often increased with great effect by the introduction, in connection with both living figures and foliage, of scarfs, bands, girdles, and folds in the drapery, or of rectangular lines of archi-

FIG. 94.—THE DEATH OF ANANIAS.—Cartoon by Raphael.

See pages 72, 144, 257, 287, 297.

tecture which in pillars, entablatures, niches, and pedestals surround or support the figures. See those on pp. 30, 74, 121.

Both these methods have a place too in architecture. All must have noticed that perpendicular lines when car-

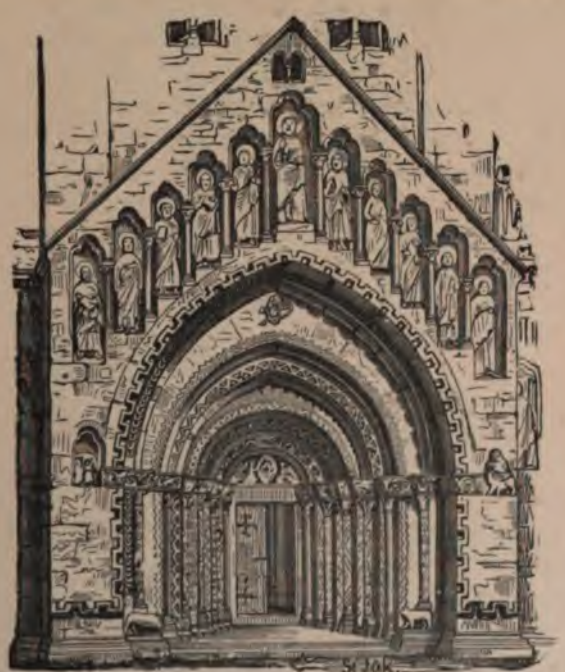


FIG. 95.—DOORWAY OF A CHURCH IN JÁK, HUNGARY.
See pages 180, 291.

ried into the air, as in the case of two sides of a square tower, seem to approach each other; also that when two sides of a roof actually touch, they support each other. Evidently artists are only carrying out hints from these facts when they widen the sides of a tower's base and

FIG. 96.—ARCH IN THE ALJAFERIA OF ZARAGOZA, SPAIN.

See pages, 37, 180, 291.

make them narrower at the top, thus increasing its apparent height; or when they cause the sides actually to meet in the spire or steep gable at its top, thus increasing also the ease of construction. Many great buildings, like the cathedrals and palaces of Europe, are designed according to the first of these methods. The basements are made visibly broader than the superstructures, and the lines of enclosure, as they are carried up at both sides, are gradually brought nearer together. See Fig. 2, page 17.

The method of *gradation* is illustrated also, though probably not often intentionally, in those cases so frequent in Gothic architecture, in which, over the same opening, a rounded arch is used immediately below a pointed one. An admirable adaptation of this method, revealing many successive stages of change, may be noticed in the "Doorway of a Church in Jāk, Hungary," Fig. 95, page 289. Gradation of an opposite kind, in that the sharper form is at the bottom, may be seen in "The Arch from the Aljaferia of Zaragoza, in Spain," Fig. 96, page 290.

A recognition of the effectiveness of *gradation* as a method, undoubtedly explains the regular increase in the number of windows in each successively higher story that is common in Italian towers. Evidently their builders first recognized that the lower stories needed to be constructed more solidly in order to sustain a greater weight; afterwards, their artistic sense led them to the method of form which they adopted, and which, as all will perceive, gives to the whole a peculiarly logical and therefore orderly and unifying effect. Notice the tower of the "Cathedral of Sienna," Fig. 97, page 292, also the front façade of the same cathedral, in which an application of this method is suggested in the difference between the

FIG. 97.—CATHEDRAL OF SIENNA, ITALY.

See pages 18, 87, 207, 261, 291.

angles over the doors and those in the roof, the latter being the sharper.

Why is it, by the way, that this method of *gradation* has not been applied to façades more extensively? Why, especially in our own times, when so many are busying themselves in trying to discover a "new style" of architecture, has no one thought of developing the possibilities of this? Here is an opportunity for doing something that has never been done before. It would differ too from most things of the kind, in that it could be done in strict fulfilment of every law of the sphere in which it would be attempted. Experience has revealed that in buildings constructed of stone and brick, the low, flat arch is capable of sustaining more weight than the high, pointed one. For this reason, the former is appropriately used in crypts, basements, and lower stories. It has been found also that roofs with steep gables are the best adapted for shedding the snow that accumulates upon them in the winter of a cold climate. Besides this, it is known that when height is an object, the pointed gable or spire, all things considered, is the most beautiful as well as the most easy to construct. Between the flat arches of the first story and the pointed arches of the roof and spire there is often great difference. In order to connect the two in a manner satisfactory to artistic demands, it is strange that the artistic propriety of increasing the pitch of the window-caps in successive stories by *regular gradations* has not been formally recognized. For instance, the arches over the openings of the first story could be made nearly horizontal, those of the second story more rounded, those of the third more rounded still, and those of the upper story pointed.

No buildings exist, probably, that, as wholes, illustrate this method; but, if we exclude from consideration the

FIG. 98.—RATH HOUSE, BRUNSWICK, GERMANY.

See page 295.

lower story of the "Rath House of Brunswick, Germany," (Fig. 98, page 294), the upper stories will reveal something of the effect that is here suggested. The same may be seen, too, as applied to interiors, in the successive arches of the Church of San Pedro de Cardeña (Fig. 99, page 296).

An effect, the reverse of these, in which the order of *gradation* is from a sharper arch upward to a flatter one, may be seen in the front of the Church of St. Maclou at Rouen, where, of three angles, the one over the lower front door is the most acute, one over a large window above somewhat less acute, and one higher up over the roof the least acute of the three (Fig. 100, page 298).

It is to be said, however, that the effect of gradations in this direction from a higher arch upward to a lower arch is less artistic than of those in the opposite direction. As has been said, the flat arch is the one that is fitted to sustain the greater weight, and the sharp arch in the roof is the one that affords the better watershed. Besides this, too, as a rule, the outlines of hills, trees, and living creatures taper toward their highest points. The effects of works of arts, even where they involve no direct imitation, should correspond as far as possible to both the principles and appearances of nature. It seems desirable, therefore, that the order of *gradation* from the lower to the higher stories should be the one that was first described.

What was said, a few pages back, of the use of curvature in architecture, is equally applicable to *abruptness* in the introduction of forms of different styles. Though appropriate occasionally, as was shown when treating of antithesis, page 31, it is much less appropriate than in painting and sculpture. In the latter arts, one is often

FIG. 99.—INTERIOR OF SAN PEDRO DE CARDEÑA, SPAIN.

See page 205.

at liberty to imitate *abruptness* or any other condition, if only it be found in nature; but in an art in which men do not take forms ready-made, and the object of which is to reduce things to systematic and intelligible *order*, artists must be especially careful to have it appear that this has been done.

Turning now to *progress*, it is comparatively easy to understand how this may be secured in poetry and music, the forms of which consist of words and sounds necessitating movement. But in painting, sculpture, and architecture, there is no literal movement. If they represent with fidelity things as they appear in nature, they can only reproduce that which takes place in a single moment of time. There are, indeed, paintings in which more than this is attempted. A fresco in the Sistine Chapel in Rome, by Boticelli, entitled "The History of Moses," represents the prophet in six or seven different situations at different periods of his life; and one in the Campo Santo at Pisa, by Benozzo Gozzoli, entitled "Noah and his Family," gives us at least three different events in the life of that patriarch. But such paintings have never ranked high in art. It seems to be recognized that they are not faithful reproductions of nature, and are therefore artificial.

In contrast to these, Raphael's "Death of Ananias," Fig. 94, page 288, will show us how there can be *progress* and yet no literal movement. That which is represented in the cartoon could take place at one moment of time. Yet at this moment the idea, forcibly impressing those nearest the principal figure, has not taken possession of those remote from him. The picture represents, therefore, different stages of *progress* in the development of the idea, or of the influence exerted by it; and it is almost impos-

sible to conceive of any painting or statue, however small, in which the *progress* of the idea in its advance to take possession of the whole body of the subject or subjects, might not be represented in an analogous way. In a human figure, the expression of the face may be in advance of that of the arms or hands, the expressions of these in advance of that of the lower limbs, while at the same time the adjustments of the clothing may give scarcely any indications of that which has begun to influence the body underneath it. (Fig. 45.)

FIG. 100.—ST. MACLOU, ROUEN, FRANCE.
See page 295.

Nor is it less possible to represent the effects of *progress* in buildings. In many of the English cathedrals the whole development of Gothic architecture from the Norman, through the pointed, decorated, and perpendicular, can be traced literally in

the different forms used in different parts. But progress in such a literal sense is not essential, nor is it always consistent with *unity*. When, according to the method of *gradation* described a moment ago, one form of arch is used above the lower openings, and another sharper development of the same over higher openings, and another still sharper over the highest, we have a representation of progress of a more desirable kind. So, too, we have the same in the interior of a cathedral, when the arches above seem to grow like limbs of trees out of the shafts below them, and when the chancel beyond the nave, to which so many lines of the walls and ceiling point, seems, with its finer elaboration of the resources of outline and its grander wealth of color in window and altar, to burst upon the vision like a flower, for which all the rest has furnished only a splendid preparation for unfoldment. In these and other ways, there are buildings so constructed, that they seem to be almost as much the results of growth and, in this sense, of *progress* as do products of nature with which we are accustomed to associate the two.

At the opening of this volume, in Chapter II., it was shown that the first efforts of the mind in the direction of art-composition are made for the purpose of securing effects of *unity*, in order to accommodate the result to the requirements of human conception. It was shown also that the occasion for these efforts arises from the *variety* everywhere characterizing the natural forms of which the artist is obliged to construct his products. Everything that has been unfolded between that chapter and this, has been a description of different methods of arrangement through which factors of a form, while exhibiting *variety*, can, nevertheless, be made to exhibit

unity. But in none of these methods has there been necessitated such an absolute blending of the appearances of the two as in *progress*. In this the *variety* which in most of the arrangements is accepted as a necessary and accidental evil, becomes essential. As just stated on page 270 there can be no *progress* except of something that is clearly recognized to be a *unity*. But it is equally true that there can be none except as that which is a *unity* is perceived to be characterized by *variety* also. In *progress* therefore all the methods of art-composition that we have been considering seem to culminate. We could continue our subject from this point only, as was intimated in Chapter VIII., by taking up *rhythm*, *proportion*, and *harmony*. But each of these differs in character from the methods hitherto considered. It is a complex result involving invariably an application of all of them in combination, yet springing from them only so far as the mind is necessarily and often unconsciously moved to its action by the principles underlying them. For these reasons a satisfactory discussion of any phase of our subject beyond what has already been considered, seems to demand a different mode of treatment. It is fitting, therefore, that the course of thought pursued in the present volume should here be brought to a close.

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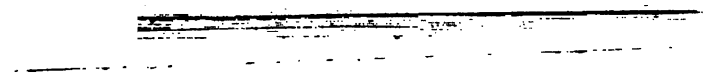

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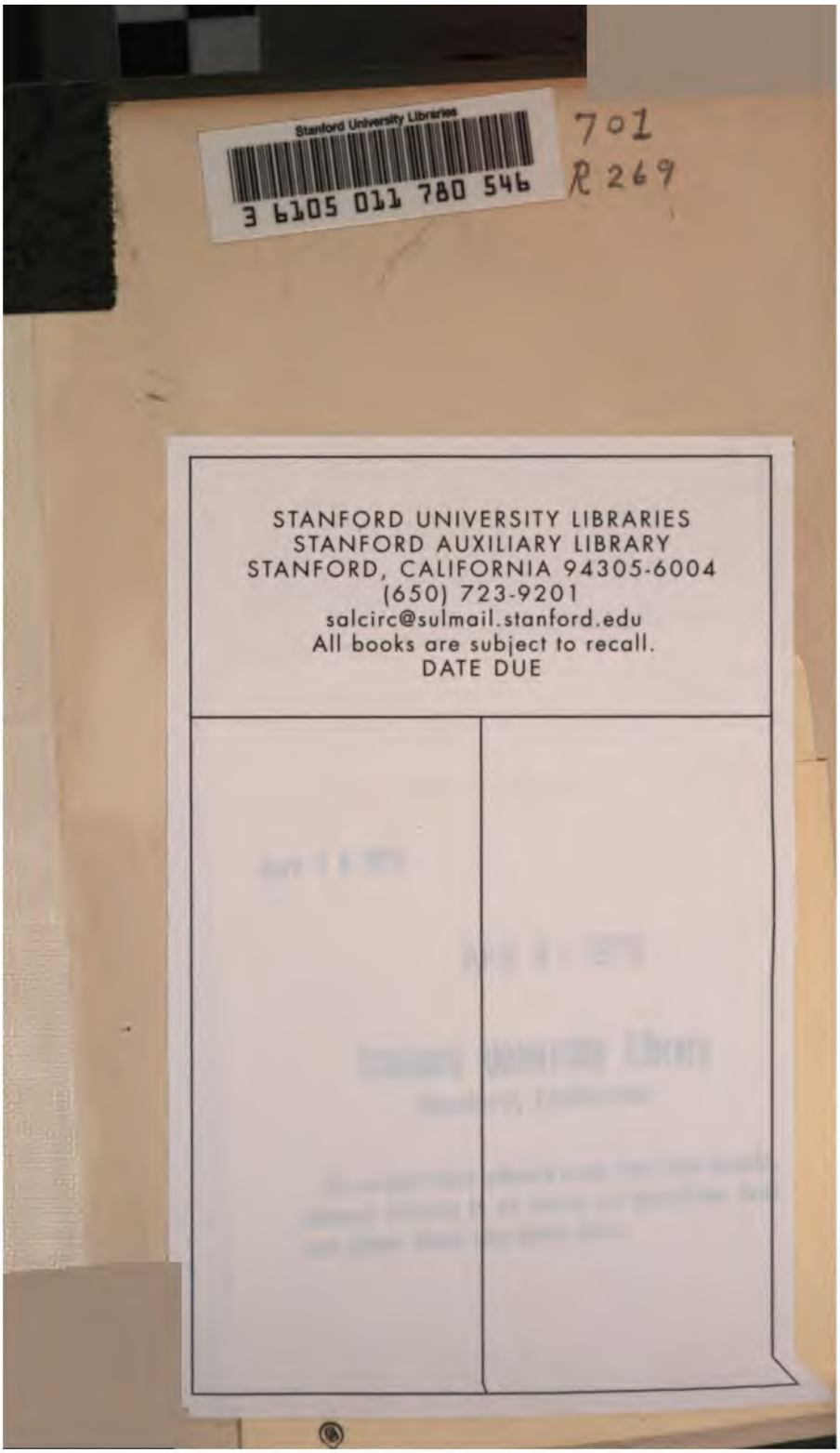
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